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## CONTRACTS OF BOARDS OF HEALTH.

**THE MAINE SUPREME COURT HOLDS THAT A CONTRACT BETWEEN A BOARD OF HEALTH AND ONE OF ITS MEMBERS IS VOID.**

The Supreme Judicial Court of Maine, in an opinion which is published on page 2967 of this issue of the Public Health Reports, decided that a contract for services entered into by a board of health with one member of the board was not valid.

The plaintiff was one of the three members of the board of health of Rumford, Me. He was employed by the board at an agreed compensation of \$10 a day to care for a patient suffering with a contagious disease. The court decided that the contract was illegal and void. There was no fraud or concealment in its making, and the contract was reasonable in itself; but the court considered that each member of the board occupied a position of trust, and that it was improper for one member to place himself in a situation where his personal interest in making the contract and in its performance might be antagonistic to a proper performance of his duties to the community as a member of the board. In other words, it was not proper for him as a member of the board to take part in the making of a contract with himself as an individual; and even if he took no part in the actual making of the contract, his position as a member of the board would be likely to influence the action of the other members.

The court, however, intimated that, as the services were actually rendered, and the community should in fairness pay for them, it might be possible for him to recover what the services were reasonably worth as though no contract had been made.

## VIRULENT SMALLPOX.

**A REPORT OF THE OUTBREAK AT NEW BEDFORD, MASS., MAY 14-JULY 28, 1915.**

By E. F. CODY, Acting Assistant Surgeon, U. S. Public Health Service.

Between May 14 and July 28, 1915, there were reported and quarantined in New Bedford 23 cases of smallpox, of which 10 were fatal, giving a fatality rate of 43.3 per cent. The disease was of the virulent type. The eruption was abundant, being in 10 cases confluent and in 4 hemorrhagic.

The source of the original infection was not discovered. It was found that in case No. 3 (see table) the patient had been ill with con-

stitutional symptoms on April 17, and two days later developed an eruption which was presumed to be chicken-pox by the medical attendant, which opinion was supported by the medical inspector of the local board of health. During his illness this patient was visited by the persons who later constituted the patients in cases Nos. 1 and 2 and the person who later became case No. 5, passing by was hailed by No. 3's wife and asked to procure an eyestone to be used in No. 3's sore eye. This he did, and returning, put the stone in the eye of No. 3, presuming that the disease of his friend was measles, then prevailing in the city. Two weeks later he was taken ill.

The family of the patient in case No. 4 removed from the house of No. 3 eight days before No. 3 became ill.

*Nativity of patients.*—With one exception (a native of Quebec Province) the disease prevailed among natives of the Cape Verde Islands and the Azores and their American-born children.

*Neighborhood and domicile.*—All resided within a radius of a quarter of a mile except the patients in cases Nos. 9, 13, 14, and 15, who lived one mile distant, and Nos. 10, 17, 18, and 43, who lived about half a mile away.

These people occupied 13 separate frame houses, 3 cottage or single apartment houses, and 10 houses of two or three tenements each. In but one house (cases Nos. 22 and 23) was the disease found in two tenements.

OCCUPATION OF PERSONS ATTACKED.

Occupation.	Women.	Men.
Cotton mill. ....	2	4
Housework .....	3	.....
Grocer .....	.....	2
Fish packer .....	.....	1
Laborer .....	.....	2

Excepting the grocers, father and son, no two patients worked together.

*Number affected in each family.*—In two families 4 were affected, in one family 3, in two families 2, and in eight families 1.

*Vaccination.*—In no case could be found the typical scar of a previous successful vaccination. The patients in cases Nos. 11, 12, 13, 14, and 18 were vaccinated within a few days after the discovery of smallpox in the family. The technique followed is not known. The persons who later became cases Nos. 15 and 17 were said to be too young to be vaccinated.

The sick were removed as soon as the diagnosis was established to a frame building used for many years as a smallpox hospital. All inmates of infected houses were vaccinated and confined to the premises for 14 days. Formaldehyde fumigation of the apartments followed.

TABULATION OF 23 CASES OF SMALLPOX IN NEW BEDFORD, MASS., MAY 14-JULY 28, 1915.

No. case	Age.	Sex.	Nativity.	Vaccinated previous to attack.	Scar.	Type of eruption.	Duration of illness when discovered.	Termination.	Complications and sequelae.	Remarks.
1.	39 years.	Female.	Cape Verde.	8 years.	None.	Confluent.	9 days.	Recovered.	Deep scarring and pitting.	Visited No. 3 during his illness.
2.	34 years.	do.	do.	18, 12, 10 years.	do.	do.	6 days.	Died twelfth day.	Endocarditis; sudden death.	Do.
3.	36 years.	Male.	do.	13 years.	do.	Discrete.	do.	Recovered.	do.	Had "chicken pox" in April.
4.	6 years.	Female.	do.	Not vaccinated.	do.	do.	3 days.	do.	do.	Moved from house of No. 3.
5.	29 years.	Male.	do.	do.	do.	Confluent.	do.	do.	do.	Visited No. 3 during illness.
6.	34 years.	Female.	do.	1 year.	None.	do.	do.	Died fifteenth day.	Deep pitting and scarring.	
7.	20 years.	do.	Azores.	15 years.	do.	Discrete.	6 days.	Recovered.	Hematuria last 4 days; eruption hemorrhagic second day.	Wife of No. 5.
8.	21 years.	Male.	Cape Verde.	2 years.	do.	Confluent.	8 days.	Died twelfth day.	do.	
9.	55 years.	do.	do.	38 years.	do.	do.	7 days.	Died thirteenth day.	Eruption hemorrhagic fifth day.	
10.	28 years.	do.	Azores.	8 years.	Fair.	Discrete.	6 days.	Recovered.	do.	Daughter of No. 5.
11.	2 months.	Female.	United States.	11 days.	Scab.	do.	7 days.	Died fifteenth day.	do.	Son of No. 5.
12.	4 years.	Male.	do.	do.	do.	do.	do.	Recovered.	do.	Son of No. 5.
13.	27 years.	do.	Cape Verde.	14 days; 22 years.	do.	do.	do.	do.	do.	Son of No. 9 and lived with him.
14.	2 years.	do.	United States.	14 days.	do.	do.	4 days.	do.	do.	Son of No. 13.
15.	6 months.	do.	do.	Not vaccinated.	do.	do.	do.	Died eleventh day.	do.	Son of No. 13; "too young."
16.	32 years.	Female.	Azores.	18 years.	None.	Confluent.	do.	Died tenth day.	do.	Son of No. 10; "too young."
17.	1 month.	Male.	United States.	Not vaccinated.	do.	do.	5 days.	Died fourth day.	do.	Lived with Nos. 10 and 17.
18.	20 months.	Female.	do.	13 days.	Scab.	do.	6 days.	Died twelfth day.	do.	
19.	6 years.	do.	do.	Not vaccinated.	do.	Discrete.	7 days.	Recovered.	do.	Father of No. 19.
20.	46 years.	Male.	Cape Verde.	10 years.	None.	do.	do.	do.	do.	
21.	43 years.	do.	Canada.	20, 10 years.	do.	do.	do.	Died seventeenth day.	Deep scarring and pitting.	Infected by No. 23.
22.	17 years.	do.	Azores.	7 years.	do.	Confluent.	do.	do.	Eruption hemorrhagic seventh day.	
23.	24 years.	do.	United States.	Not vaccinated.	do.	Discrete.	3 to 4 weeks.	Recovered.	do.	Infected by No. 16.

**TOBACCO AND SNUFF.**

**THEIR USE BY WHITE SCHOOL CHILDREN IN THE CITY OF X.**

By C. W. STILES, Professor of Zoology, and D. N. RICHARDS, M. D., Assistant, United States Public Health Service.

During a study of the white school children in the city of X, every child was asked whether he (or she) dipped snuff or chewed or smoked tobacco. Answers were obtained for 2,215 pupils (1,043 boys, 1,172 girls) ranging in age from 4.75 years to 19.75 years, inclusive. In many instances the answers were given by the parents and in nearly all cases the parents were aware of the answers given by the children. The figures obtained practically represent, therefore, the children who use snuff or tobacco with the knowledge or consent of the parents, but probably do not include clandestine smokers.

All tabulations of results were classified: First, by boys and girls; second, by quarter-year age of the children, and third, by the sanitary condition of the home as represented by sewer connection (group S), or by the presence of a privy (group P). Group U contains children from homes with unknown sanitation.

The following table gives a general summary of the results obtained:

	Admit—						Deny—		Total number.
	Chewing.		Dipping.		Smoking.		Number.	Per cent.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.			
<b>BOYS.</b>									
Group S.....	11	1.42			50	6.46	717	92.52	775
Group P.....	5	2.91			9	5.23	159	92.44	172
Group U.....	2	2.08	1	1.04	13	13.54	80	83.33	96
Total.....	18	1.73	1	.10	72	6.90	956	91.66	1,043
<b>GIRLS.</b>									
Group S.....			5	.58			857	99.42	862
Group P.....			1	.43			234	99.57	235
Group U.....							75	100.00	75
Total.....			6	.51			1,166	99.49	1,172
Grand total.....	18	.81	7	.32	72	3.25	2,122	95.80	2,215

**Boys.**

Of 1,043 boys, 956 (namely, 91.66 per cent) denied chewing, dipping, or smoking, and 87 (namely 8.34 per cent) admitted one or more of these habits.

Eighteen boys (1.73 per cent) admitted chewing; 1 boy (0.096 per cent) admitted snuff dipping; 72 boys (6.9 per cent) admitted smoking.

Dividing the boys according to the sanitation of their homes, it is seen that in the less refined homes (provided with privies) prac-

tically twice as many boys (2.91 per cent) chew as in homes connected with sewers where 1.42 per cent chew.

The percentage of smokers was slightly higher (namely, 6.46 per cent) in the more refined homes than (5.23 per cent) among the boys from the less refined homes.

Among 96 boys for whose homes we obtained no datum regarding sanitation, 2.08 per cent chew, 1.04 per cent dip snuff, and 13.54 per cent smoke.

#### Girls.

Of 1,172 girls, 1,166 (namely, 99.49 per cent) deny chewing, dipping, or smoking. All girls (100 per cent) deny chewing or smoking; 6 girls (0.51 per cent) admit dipping.

Dividing the girls according to the sanitation of their homes, the striking conclusion is reached that a slightly greater percentage (namely, 0.58 per cent) of the girls from the more refined homes dip snuff than there are snuff dippers (0.43 per cent) among the girls from the less refined homes. This difference is, however, so slight that it might easily be accounted for by the recent very marked improvement in the sanitation of the city; therefore the difference is not to be taken into serious consideration.

#### Ages of Users.

The youngest tobacco chewer we found is 8 years old. The chewers are: 8 years old, 1 boy; 9 years, 3 boys; 10 years, 2 boys; 11 years, 3 boys; 12 years, 2 boys; 13 years, 2 boys; 14 years, 3 boys; 18 years, 1 boy; 19 years, 1 boy. That not one chewer is found among 124 boys from 15 to 17 years of age is a little difficult to believe.

The youngest dipper is 9 years old. The dippers are: 9 years old, 1 boy, 1 girl; 11 years, 1 girl; 12 years, 1 girl; 14 years, 2 girls; 15 years, 1 girl.

The youngest smoker is 6 years old. The smokers are: 6 years, 1 boy; 8 years, 1 boy; 9 years, 3 boys; 10 years, 6 boys; 11 years, 8 boys; 12 years, 6 boys; 13 years, 13 boys; 14 years, 8 boys; 15 years, 12 boys; 16 years, 6 boys; 17 years, 4 boys; 18 years, 3 boys; 19 years, 1 boy.

In the foregoing list of ages, the actual numbers, not the percentages, are given.

#### Age at which children begin the use of tobacco or snuff.

In a number of cases it was possible to obtain a definite statement as to the age at which these habits were begun.

*Chewing.*—One boy began to chew at 8 years of age, 1 at 10, and 2 at 12.

*Smoking.*—One boy began to smoke at 3 years of age, 2 at 6, 2 at 7, 6 at 8, 8 at 9, 4 at 10, 4 at 11, 4 at 12, 2 at 13, 1 at 14, 1 at 17.

*Dipping.*—Two girls began to dip at 3 years of age, 1 at 4, 1 at 9, and 1 at 12. One of the children who began dipping at 3 years of age did so upon the advice of the family physician in order to “preserve her health.” Similar cases are not very rare in the rural districts, and this girl came from the country.

#### Conclusion.

In the city of X, less than 1 per cent of the 2,215 white school children admit chewing tobacco and less than 1 per cent admit dipping snuff, while 3.25 per cent admit smoking. In all, 4.2 per cent admit the use of tobacco (chewing or smoking) or of snuff. Smoking and chewing were admitted only by boys, while more girls than boys admitted dipping snuff.

The use of tobacco was found to be more common among children from homes with inferior sanitation (privies) than among those from homes with better sanitation (sewer connection).

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## INDUSTRIAL HYGIENE.

### A PLAN FOR EDUCATION IN THE AVOIDANCE OF OCCUPATIONAL DISEASES AND INJURIES.<sup>1</sup>

By J. W. SCHERESCHEWSKY, Surgeon, United States Public Health Service.

It must be confessed that this subject is one to be approached in a spirit of diffidence for the reason that the results to be effected are so far-reaching and of such fundamental importance, the methods employed play such a leading part in the final result, and finally, the inauguration of any thorough plan of education will cost so much money, that the writer may well be excused for a tentative spirit in making suggestions.

There would hardly seem need for an extended discussion of the necessity for education in industrial hygiene and the avoidance of occupational complaints. There are approximately from 25,000,000 to 30,000,000 industrial workers in this country, all of whom are more or less exposed to health hazards. While many of these are the ordinary health hazards, present in the industrial as in any other sphere, on the other hand many of them are inherent to the occupation in question. There can be no question that the steady operation of these hazards exerts a deleterious influence upon the health of the individual, while many of them seriously menace life or curtail the period of productive activity.

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<sup>1</sup> Read before the Section on Industrial Hygiene, American Public Health Association, Rochester, N. Y., September 7, 1915.

One of the most important results effected by the present "Safety First" campaign is that our eyes have been opened to the fact that it is not sufficient to make industries "Safe" from an accident standpoint; they should be "Safe" from a health standpoint as well. In other words, no industry ought per se to exert an injurious influence upon the health of the worker; in no industry should occupation therein entail curtailment of the period of economic activity.

While in the absence of reliable statistics we can only approximate the average yearly loss through the sickness of workers, figures which have been published in Europe enable us reasonably to conclude that the average annual loss through sickness, to workers in this country, is not far from eight to nine days. This would amount to some 600,000 years each year, or an economic loss of \$360,000,000 if average annual earnings are \$600. The loss due to premature physical decline or to reduction in productivity, the result of the continuous operation of industrial health hazards, can not as yet be estimated. This can be arrived at only as a result of future studies which are highly necessary.

A large part of the loss just adverted to is preventable and is due to lack of knowledge or to carelessness. It need hardly be said that the need for the conservation of human life and health was never more imperative than it is to-day. The gigantic destruction now going on daily in the vast conflict of European nations only emphasizes the urgency for methods of conservation of life and health. In addition to this, our attention is being repeatedly called to the alarming increase in the so-called "Diseases of degeneration." The conclusion seems inevitable that this increase can be due to nothing but the operation of modern conditions of civilization which have modified, more than in any other particular, the ways in which man gains his daily bread, i. e., industrial conditions.

Clearly there is need that something should be done. We all know, from the history of campaigns in the interest of the public health in the past, that education is one of our most effective means of improving health conditions. A more difficult question is the consideration of educational methods and the social groups to which this education should be directed. A short consideration will convince us that it will not be sufficient to educate workers alone. The field to be covered is more extensive. Not only must the worker be reached but educational measures must extend to the general public and to the medical profession.

Any plan for education must, therefore, be general in nature because of the close interdependence of all the units of society. Thus, the education of the medical profession is needed for the purpose of stimulating the interest in the study of diseases in relation to occupation, the improvement in collection of clinical data bearing upon

occupational diseases, and the promotion of research work along those lines so that practical recommendations for advances in the sanitation of industries may result.

The education of the general public is required, first, because the history of all our constructive health legislation of the past shows that an enlightened public opinion is necessary to success, and, second, because it is impossible so to delimit the field of industrial hygiene as to separate it from the hygiene of the total environment. Moreover, employers of labor are an important class of the general public. Their cooperation is necessary if industrial health conditions are to be improved. Finally, the workers themselves are to be educated. In order to secure substantial improvement in the health conditions of industries, we must secure knowledge, on the part of the worker, of the general principles of industrial hygiene and the care of his own body. Otherwise provisions for his health and safety will, in the absence of his intelligent cooperation, be largely nullified.

Beginning with the medical profession, the recognized source of most of our hygienic information, it is only too plain that study of the relation of disease to occupation is regarded as a specialty and something with which neither the general practitioner nor the specialist in other fields is very closely concerned. Yet industrial workers constitute by far the largest class of medical patients. It is evident to anyone who examines the clinical records of the average hospital that with a wealth of material for study, with but rare exceptions, scant attention is paid, for the most part, to the relation of industrial health hazards and of occupational diseases to the morbid history of patients in such hospitals. Even the occupation of patients is imperfectly ascertained, the data on this point in most hospital histories being so vague and unreliable as to be practically valueless.

The influence of industries upon health is a subject which has been hitherto sadly neglected both in our medical curricula and at the bedside. There is therefore need to educate the medical profession to the importance of industrial hygienic measures and the study of the relation of occupations to diseases.

Inasmuch as hospitals are the chief sources of clinical material, and hence the natural locations where intensive studies of disease may be made, it is clear that here must begin the first steps in the education of the medical profession. As Hayhurst has pointed out, the first thing necessary to the utilization of hospitals as centers of education in industrial hygiene, is the adoption of a uniform nomenclature which will exactly designate the occupation of hospital patients. In taking histories, similar standards are required which will furnish information as to the previous industrial history of the patient and the relation, if any, of this to his previous or present morbid history. At all clinics for the instruction of medical students



stress should be laid upon these points by the demonstrator so that all such students may gain an idea of the important bearing of such data upon disease.

It is also important that death certificates should correctly and exactly indicate the occupation of the decedent. The instruction of the medical profession in this matter is primarily the function of the registrars of vital statistics. There is room for improvement in the form of death certificates themselves in that these should provide more fully for the accurate description of the occupation besides permitting the notation of previous occupations and the time during which each was pursued. Accurate information of this kind would be invaluable in the study of the mortality of occupations.

The increase in the interest of study of the relation of occupation to disease produced in medical centers of instruction by the measures thus roughly indicated, even if carried out in a relatively small number of hospitals, could hardly fail to produce an accumulation of valuable information.

This, together with the interest aroused in the general medical profession, would not only be productive of useful suggestions for intensive research and the improvement of the hygiene of industries, but the importance of the study of the relation of occupation to disease would also become so well recognized that thorough instruction in this subject would be part of the regular curricula of medical schools. One important result would be an increase in the number of physicians qualified to undertake the medical care and supervision of large industrial plants.

Turning to the question of the education of the general public and of workers, this will be considered under one head for the reason that the latter is but a subdivision of the former. All are in need of education in these particulars, the only difference being that in the case of workers, the education should be somewhat more specific to suit the occupation followed.

It is plain that, while we may leave, to a certain extent, at least, the education of the medical profession to centers of medical instruction, some of which are recognizing the importance of instruction of this character, the education of so vast a body as the general public must be the result of governmental cooperation, Federal, State, and municipal, allied with other civic agencies, such as associations formed for the betterment of industrial conditions and the trades unions of various industries.

Before any such cooperation can be effective to its fullest extent, there is certain preliminary work to be undertaken which, while it need not prevent the initiation of educational measures, will when completed add to their force and definiteness. By this preliminary work is meant the creation of uniform minimum standards of indus-

trial sanitation and legislation. Inasmuch as the Federal Government is recognized as the standard-making agency par excellence in this country, it would seem that the formulation of the standards referred to is peculiarly the work of Federal authorities.

The adoption of such standards, once they are formulated, is of course the work of the legislative authority of the several States. The adoption of such standards, while not interfering with any additional precautions States or municipalities may see fit to enforce or employers of labor or labor organizations voluntarily to adopt will at once give emphasis, clarity, and uniformity to an educational propaganda in that such standards necessarily define the scope of the information disseminated, increase its authority, limit the introduction of irrelevant material, and avoid the advocacy of conflicting measures in various parts of the country.

The history of the educational campaigns of the past—such as, for instance, the crusade against tuberculosis, the undue mortality of infants—and that of the present campaign for the prevention of industrial accidents furnishes us with a number of means by which information in regard to industrial hygiene and the avoidance of occupational complaints may be generally disseminated.

These summarized roughly are:

1. Permanent exhibits.
2. Traveling exhibits, including moving pictures.
3. Popular lectures.
4. Bulletins issued for popular distribution by Federal, State, and local health authorities, and by private associations.
5. Popular articles published by the press.
6. Instruction in public schools.

*Permanent exhibits.*—The museum of industrial hygiene is a powerful instrument for public education wherever located. Certain museums of industrial hygiene, located abroad, such as the one at Charlottenburg, for example, have aroused much popular interest, necessitating an increase in their funds and enlargement of floor space.

Steps should therefore be undertaken for the establishment of such museums in our important industrial centers. Such a museum is already located in New York City. Such museums should, in size and importance, be on a par with the magnificent museums of natural history common in our large cities, through which an interested throng of visitors is constantly passing. A sufficient number of such museums of industrial hygiene situated throughout the country would undoubtedly play an important part as centers for the dissemination of information in respect to industrial hygiene.

*Traveling exhibits.*—One need hardly point out the efficiency of the traveling exhibit in that it goes to the people rather than they

to it. As the material of such exhibits is naturally limited to the amount and dimensions required for easy transportation, much of the success of such exhibits depends upon the personality and training of the demonstrators who travel with it and the discrimination with which it is planned.

I know of no other way, however, by which such large numbers of persons may be reached and impressed in so short a time as by means of the traveling exhibit. Moreover, such traveling exhibits possess the further advantage that their subject material may be modified to meet the industrial conditions of the region through which they are traveling. In this way the special information needed in the premises is disseminated. As State health authorities very generally employ this method for educating the public in regard to other health matters, the use of such exhibits for educational purposes in industrial hygiene would be merely the extension of former activities.

Naturally, the moving picture forms a means for reaching an extensive audience which has been largely used in the past for educational purposes. In similar fashion, it constitutes an important and readily available means for popular education in industrial hygiene.

*Popular lectures.*—Many State and municipal health organizations now possess a staff of lecturers who deliver popular lectures upon health subjects. It can readily be seen that it is practicable to expand existing organizations to provide for the present necessity for popular instruction in industrial hygiene.

Popular articles and bulletins dealing with this subject are here passed over as their sphere and utility have become well defined through previous public health activities in other directions.

*Instruction in public schools.*—Provisions are made in the public schools of most States for the instruction of school children in hygiene. There is still a tendency on the part of the general public to take such instruction too lightly, or to regard it somewhat in the light of a fad. Yet all who have investigated this subject can not but be impressed with the fact that personal hygiene is the most important factor in maintaining the health and efficiency of the individual, due provision having been made to secure healthful places of employment.

In a recent investigation among the garment workers of New York City, made by the Public Health Service in 1914, neglect of the principles of personal hygiene, rather than insanitary working conditions, was found to play a principal part in the incidence of defects and diseases among these workers. Inasmuch as probably one-third of all school children will subsequently engage in industrial occupations, while the great majority of males in this country are employed, upon reaching manhood, it seems obvious that the proper time to equip the citizen with the hygienic knowledge necessary to enable him to care for his

body properly is not after he has entered a given occupation, but is an essential part of the training of the years of growth and development. Real knowledge of personal hygiene is quite as important for the citizen of the future as a knowledge of reading and writing. It would seem, therefore, particularly in connection with the vocational trend observable in the curricula of our most progressive public schools, that the courses of instruction in hygiene ought to be amplified and modified in such manner that the instruction in personal hygiene will be thoroughgoing and apply especially not only to the present but to the future maintenance of the body in health, after entrance into an occupation.

We must, therefore, consider the public school as an important instrument for improving the hygiene of workers of the future.

Considering immediate measures to be adopted for the education of the present generation of workers, it must be confessed that the outlook is not so hopeful as regards the expectation of results commensurate with the effort expended. No doubt we must await the advent of the succeeding generation for the full fruition of our educational measures. One would hardly expect busy workers of the present, intent upon other things, suddenly to acquire a lively sense of the importance of industrial hygiene and attention to the care of the body. A fortunate countervailing circumstance is the present campaign in the interests of industrial safety which has already prepared the ground, awakened the minds of the present day workers to the value of life and limb and set in motion a complicated machinery for education in the prevention of accidents.

The existing apparatus for the promotion of industrial safety should, in addition to the activities of Federal, State, and municipal health authorities, furnish a useful nucleus for the propagation of education in industrial hygiene and the avoidance of occupational complaints. Besides this we have the various labor organizations which should be enlisted in an educational movement for the improvement of the health of their members.

There remain the employers of labor. The concept is fast gaining ground among them that the individual is one of society's precious assets; that the condition of his health is not a matter of indifference, that it is poor social and business economy to subject workers to avoidable industrial hazards. As a consequence many employers are now beginning voluntarily to improve working conditions in their plants, supervise the health of their personnel, and attempt educational measures among them. The conservation of the health of workers and the improvement of conditions of employment, apart from purely humanitarian aspects, have been found to yield increased efficiency and economy in production, have fostered the spirit of

cooperation. The prediction may well be ventured, therefore, that employers will be found in a receptive attitude so far as educational measures are concerned.

What they will ask for, and rightly I believe, is precise information as to the improvements it is desired to effect and the practical means for carrying them out. It is here that the establishment of minimum hygienic standards will be especially valuable, as these constitute excellent guides.

There remains for discussion the agencies by which such an educational campaign may be put into operation. This campaign must be a cooperative enterprise. So far as the Federal Government is concerned, agencies already exist which can contribute their share. For instance, the Public Health Service is empowered by law to study the diseases of man and is conducting investigations in occupational diseases and the relation of occupations to disease. It stands ready to cooperate with State and municipal health authorities in the study of conditions of industrial hygiene in so far as its facilities permit. In some State and municipal health organizations provision is made for the study and the dissemination of information in regard to industrial hygiene and the prevention of occupational disease.

It needs, therefore, only an extension of agencies already in existence and cooperation in order to call into simultaneous being a number of centers making educational efforts. Boards of education can assist in a material way by improving and revising the methods of teaching hygiene in public schools so that such teaching will have a vocational trend—i. e., that it will fit our embryo citizens for their life's battle, with special reference to their future occupations.

Besides these strictly governmental agencies we have trades organizations and associations of private individuals, such as the National Safety Council, which can exert great educational influence among their members. As an example of such organizations may be cited the Joint Board of Sanitary Control of the Cloak, Suit, and Skirt and Dress and Waist Trades of New York City. This board, organized by mutual consent of the manufacturers and of the unions of these industries, has cognizance of the sanitary conditions in the workshops of the allied industries. Similar organizations in other industries might well wield great educational forces, which, cooperatively directed, should play an important part in the campaign for industrial health.

In conclusion it may be said that the need for an intensive campaign for education in industrial hygiene and the avoidance of occupational complaints is an actuality, and that agencies already exist by which such educational measures may be put into operation. What are mainly required are cooperation and the making of a beginning.

**PLAGUE-PREVENTION WORK.**

**CALIFORNIA.**

The following reports of plague-prevention work in California were received from Senior Surgeon Pierce, of the United States Public Health Service, in charge of the work:

WEEK ENDED AUG. 21, 1915.

**SAN FRANCISCO, CAL.**

**RAT PROOFING.**

<b>New buildings:</b>	
Inspections of work under construction.	57
Basements concreted (10,500 square feet).....	14
Floors concreted (740 square feet).....	2
Yards, passageways, etc. (4,019 square feet).....	28
Total area of concrete laid..square feet..	15,259
<b>Class A, B, and C (fireproof) buildings:</b>	
Inspections made.....	176
Roof and basement ventilators, etc., screened.....	1,894
Wire screening used.....square feet..	10,078
Openings around pipes, etc., closed with cement.....	1,101
Sidewalk lens lights replaced.....	800
<b>Old buildings:</b>	
Inspections made.....	277
Wooden floors removed.....	37
Yards and passageways planking removed.....	15
Cubic feet new foundation walls installed.....	14,770
Concrete floors installed (78,094 square feet).....	60
Basements concreted (29,025 square feet).....	18
Yards and passageways, etc., concreted (18,201 square feet).....	52
Total area concrete laid...square feet..	125,320
Floors rat proofed with wire cloth (7,371 square feet).....	8
Buildings razed.....	20
New garbage cans stamped approved..	373
Nuisances abated.....	181

**OPERATIONS ON THE WATER FRONT.**

Vessels inspected for rat guards.....	22
Reinspections made on vessels.....	24
New rat guards procured.....	8
Defective rat guards repaired.....	11
Rats trapped on wharves and water front..	49
Rats trapped on vessels.....	14
Traps set on wharves and water front.....	179
Traps set on vessels.....	63
Vessels trapped on.....	12
Poisons placed on water front (pieces)....	3,600
Poisons placed within Panama Pacific International Exposition grounds (pieces)..	7,200

**SAN FRANCISCO, CAL.—Continued.**

**OPERATIONS ON THE WATER FRONT—continued.**

Bait used on waterfront and vessels (bacon, pounds).....	6
Amount of bread used in poisoning water front (loaves).....	12
Pounds of poison used on water front.....	6

**RATS COLLECTED AND EXAMINED FOR PLAGUE.**

Collected.....	370
Examined.....	262
Found infected.....	None.

**RATS IDENTIFIED.**

Mus norvegicus.....	155
Mus rattus.....	70
Mus alexandrinus.....	66
Mus musculus.....	79

**SQUIRRELS COLLECTED AND EXAMINED FOR PLAGUE.**

Contra Costa County.....	700
Monterey County.....	245
San Benito County.....	229
Alameda County.....	43
Stanislaus County.....	14
<b>Total.....</b>	<b>1,231</b>
Found infected.....	3

**RANCHES INSPECTED AND HUNTED OVER.**

Contra Costa County.....	65
San Benito County.....	32
Monterey County.....	18
Alameda County.....	
Stanislaus County.....	2
<b>Total.....</b>	<b>124</b>

**PLAGUE INFECTED SQUIRRELS.**

<b>Contra Costa County:</b>	
Shot Aug. 3, 1915. Moran and Fallon ranch (People's Water Co.), 4 miles southeast of San Pablo.....	1
Shot Aug. 5, 1915. Fitzgerald ranch (People's Water Co.), 3 miles southeast of San Pablo.....	1
J. Domingo ranch, 7 miles southwest of Lafayette, sec. 14, T. 1 S., R. 3 W.....	1

The work is being carried on in the following-named counties: Alameda, Contra Costa, San Francisco, Stanislaus, San Benito, and Monterey.

WEEK ENDED AUG. 28, 1915.

SAN FRANCISCO, CAL.

RAT PROOFING.

<b>New buildings:</b>	
Inspections of work under construction.	81
Basements concreted (14,930 square feet)	16
Floors concreted (6,600 square feet)	4
Yards, passageways, etc. (9,055 square feet)	60
Total area of concrete laid square feet.	30,485
<b>Class A, B, and C (fireproof) buildings:</b>	
Inspections made	172
Roof and basement ventilators, etc., screened	1,940
Wire screening used square feet	11,270
Openings around pipes, etc., closed with cement	1,485
Sidewalk lens lights replaced	1,000
<b>Old buildings:</b>	
Inspections made	272
Wooden floors removed	24
Yards and passageways, planking removed	19

SAN FRANCISCO, CAL.—Continued.

RAT PROOFING—continued.

<b>Old buildings—Continued.</b>	
Cubic feet new foundation walls installed	3,395
Concrete floors installed (19,963 square feet)	29
Basements concreted (28,151 square feet)	27
Yards and passageways, etc., concreted (14,197 square feet)	79
Total area concrete laid square feet	62,311
Floors rat proofed with wire cloth (3,040 square feet)	3
Buildings razed	13
New garbage cans stamped approved	331
Nuisances abated	209
<b>OPERATIONS ON THE WATER FRONT.</b>	
Vessels inspected for rat guards	28
Reinspections made on vessels	24
New rat guards procured	11
Defective rat guards repaired	5
Vessels on which cargo was inspected	1

Amount and description of cargo.	Condition.	Rat evidence.
Steamship Umatilla from Seattle:		
20 bales rags	O. K.	None.
215 cases salmon, milk, and household goods	O. K.	None.
300 sacks flour and barley	O. K.	None.

Rats trapped on wharves and water front	39
Rats trapped on vessels	17
Traps set on wharves and water front	179
Traps set on vessels	67
Vessels trapped on	11
Poisons placed on water front (pieces)	3,600
Poisons placed within Panama Pacific International Exposition grounds (pieces)	7,200
Bait used on water front and vessels, bacon (pounds)	6
Amount of bread used in poisoning water front (loaves)	12
Pounds of poison used on water front	6

<b>RATS COLLECTED AND EXAMINED FOR PLAGUE.</b>	
Collected	237
Examined	264
Found infected	None.

<b>RATS IDENTIFIED.</b>	
Mus norvegicus	140
Mus rattus	59
Mus alexandrinus	77
Mus musculus	61

*Squirrels collected and examined for plague.*

Counties.	Shot.	Examined.
Contra Costa	622	602
San Benito	213	213
Monterey	284	284
Stanislaus	13	13
Alameda	35	35
<b>Total</b>	<b>1,167</b>	<b>1,147</b>

**SQUIRRELS FOUND INFECTED.**

Contra Costa County	3
San Benito County	1

**PLAGUE INFECTED SQUIRRELS.**

<b>Contra Costa County:</b>	
Shot August 6, 1915.—Norris Ranch (People's Water Co.), 3 miles southeast of San Pablo	1 squirrel
Shot August 9, 1915.—J. Lynn Ranch, 6 miles southwest of Antioch, Sec. 11, T. 1 N., R. 1 E.	1 squirrel
Shot August 12, 1915.—J. Domingo Ranch, 7 miles southwest of Lafayette, Sec. 14, T. 1 S., R. 3 W	1 squirrel

**PLAGUE INFECTED SQUIRRELS—Continued.**

<b>San Benito County:</b>	
Shot August 14, 1915.—Frusetta Ranch, 18 miles south of Llanada, T. 16 S., R. 10 E.	1 squirrel
<b>RANCHES INSPECTED AND HUNTED OVER.</b>	
Contra Costa County	49
San Benito County	38
Monterey County	16
Alameda County	6
Stanislaus County	2
<b>Total</b>	<b>111</b>

*Record of plague infection.*

Places in California.	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number rodents found infected since May, 1907.
<b>Cities:</b>				
San Francisco.....	Jan. 30, 1908	Oct. 23, 1908	None.....	398 rats.
Oakland.....	Aug. 9, 1911	Dec. 1, 1908	do.....	126 rats.
Berkeley.....	Aug. 23, 1907	None.....	do.....	None.
Los Angeles.....	Aug. 11, 1908	do.....	Aug. 21, 1908	1 squirrel.
<b>Counties:</b>				
Alameda (exclusive of Oakland and Berkeley).....	Sept. 24, 1909	Oct. 17, 1909, wood rat.	July 12, 1915	287 squirrels, 1 wood rat.
Contra Costa.....	July 13, 1915	None.....	Aug. 12, 1915	1,583 squirrels.
Fresno.....	None.....	do.....	Oct. 27, 1911	1 squirrel.
Merced.....	do.....	do.....	July 12, 1911	5 squirrels.
Monterey.....	do.....	do.....	Apr. 10, 1914	6 squirrels.
San Benito.....	June 4, 1913	do.....	Aug. 14, 1915	50 squirrels.
San Joaquin.....	Sept. 18, 1911	do.....	Aug. 26, 1911	18 squirrels.
San Luis Obispo.....	None.....	do.....	Jan. 29, 1910	1 squirrel.
Santa Clara.....	Aug. 31, 1910	do.....	July 23, 1913	25 squirrels.
Santa Cruz.....	None.....	do.....	May 17, 1910	3 squirrels.
Stanislaus.....	do.....	do.....	June 2, 1911	13 squirrels.

The work is being carried on in the following named counties: Alameda, Contra Costa, San Francisco, Stanislaus, San Benito, and Monterey.

**LOUISIANA—NEW ORLEANS—PLAGUE ERADICATION.**

The following report of plague-eradication work at New Orleans for the week ended September 18, 1915, was received from Surg. Creel, of the United States Public Health Service, in charge of the work:

OUTGOING QUARANTINE.		BUILDINGS RAT PROOFED—continued.	
Vessels fumigated with sulphur.....	12	By concrete floor and wall.....	114
Vessels fumigated with carbon monoxide....	15	By minor repairs.....	163
Vessels fumigated with hydrocyanic gas....	1	Total buildings rat proofed.....	468
Pounds of sulphur used.....	3,950	Square yards of concrete laid.....	14,875
Coke consumed in carbon monoxide fumigation (pounds).....	22,900	Lots and sheds, planking removed.....	25
Pounds of potassium cyanide used in hydrocyanic gas fumigation.....	102	Buildings demolished.....	52
Pounds of sulphuric acid used in hydrocyanic gas fumigation.....	104	Total buildings rat proofed to date (abated).....	91,515
Clean bills of health issued.....	36	<b>LABORATORY OPERATIONS.</b>	
Foul bills of health issued.....	7	Rodents received, by species:	
<b>FIELD OPERATIONS.</b>		Mus rattus.....	272
Rats trapped.....	5,833	Mus norvegicus.....	1,223
Premises fumigated.....	1	Mus alexandrinus.....	177
Premises disinfected.....	3	Mus musculus.....	4,020
Premises inspected.....	8,149	Wood rats.....	48
Notices served.....	1,961	Musk rats.....	6
Poisons placed.....	50	Putrid (included in enumeration of species).....	94
Garbage cans installed.....	210	Total rodents received at laboratory.....	5,746
<b>BUILDINGS RAT PROOFED.</b>		Rodents examined.....	1,908
By elevation.....	89	Suspicious rats.....	135
By marginal concrete wall.....	102	Plague rats confirmed.....	2



## Plague rats.

Case No.	Address.	Captured.	Diagnosis confirmed.	Treatment of premises.
250	1423 Joseph Street.....	1915. Sept. 6	1915. Sept. 12	Summary destruction of rat harbors. Pulicide solution sprayed in vicinity. Intensive trapping and rat-proofing. Intensive trapping. Fumigation by cyanide gas. Rat-proofing.
251	837 South Fulton Street.....	Sept. 9	Sept. 16	

Last case of human plague, September 8, 1915.

Last case of rodent plague, September 16, 1915.

Total number of rodents captured to September 18..... 442, 497

Total number of rodents examined to September 18..... 286, 087

Total cases of rodent plague to September 18, by species:

Mus musculus.....	4
Mus rattus.....	17
Mus alexandrinus.....	8
Mus norvegicus.....	222
Total rodent cases to September 18, 1915.....	251

## WASHINGTON—SEATTLE—PLAGUE ERADICATION.

The following reports of plague-eradication work at Seattle were received from Surg. Lloyd, of the United States Public Health Service, in charge of the work:

WEEK ENDED AUG. 28, 1915.

## RAT PROOFING.

New buildings inspected.....	12
New buildings reinspected.....	19
Basements concreted, new buildings (13,280 square feet).....	17
Floors concreted, new buildings (23,475 square feet).....	6
Yards, etc., concreted, new structures (1,850 square feet).....	5
Sidewalks concreted (square feet).....	14, 475
Total concrete laid, new structures (square feet).....	53, 080
New buildings elevated.....	5
New premises rat proofed, concrete.....	23

## LABORATORY AND RODENT OPERATIONS.

Dead rodents received.....	30
Rodents trapped and killed.....	240
Total.....	270
Rodents examined for plague infection.....	196
Rodents proven plague infected.....	0
Poison distributed, pounds.....	17

## CLASSIFICATION OF RODENTS.

Mus rattus.....	13
Mus alexandrinus.....	61
Mus norvegicus.....	150
Mus musculus.....	46

## WATER FRONT.

Vessels inspected and histories recorded.....	9
Vessels fumigated.....	1

## WATER FRONT—Continued.

Sulphur used, pounds.....	2, 000
New rat guards installed.....	6
Defective rat guards repaired.....	4
Fumigation certificates issued.....	1
Port sanitary statements issued.....	59
The usual day and night patrol was maintained to enforce rat guarding and fending.	

## MISCELLANEOUS WORK.

Rat-proofing notices sent to contractors, new buildings.....	21
Letters sent in re rat complaints.....	6
Lectures on sanitary subjects.....	1

## RODENTS EXAMINED IN EVERETT.

Mus norvegicus trapped.....	49
Mus norvegicus found dead.....	3
Mus alexandrinus trapped.....	1
Mus musculus trapped.....	2
Total.....	55
Rodents examined for plague infection.....	51
Rodents proven plague infected.....	None.

## RAT-PROOFING OPERATIONS IN EVERETT.

New buildings inspected.....	7
New buildings concrete foundations.....	7
New buildings basements concreted (1,560 square feet).....	2
Total concrete laid, new buildings (square feet).....	1, 560

WEEK ENDED SEPT. 4, 1915.

RAT PROOFING.

New buildings inspected.....	27
New buildings reinspected.....	15
Basements concreted, new buildings (13,475 square feet).....	11
Floors concreted, new buildings (22,750 square feet).....	14
Yards, etc., concreted, new structures (3,780 square feet).....	6
Sidewalks concreted (square feet).....	15,470
Total concrete laid, new structures (square feet).....	55,475
New buildings elevated.....	4
New premises rat proofed, concrete.....	25
Old buildings inspected.....	3
Premises rat proofed, concrete, old buildings.....	1
Floors concreted, old buildings (1,750 square feet).....	1
Premises otherwise rat proofed, old buildings.....	2
Openings screened, old buildings.....	12
Rat holes cemented, old buildings.....	15
Wooden floors removed, old buildings.....	1
Doors rat proofed, old buildings.....	2
Wire screening used (square feet).....	650
Buildings razed.....	4
<b>LABORATORY AND RODENT OPERATIONS.</b>	
Dead rodents received.....	29
Rodents trapped and killed.....	262
Total.....	291
Rodents examined for plague infection.....	220
Rodents proven plague infected.....	None.
Poison distributed, pounds.....	28
Bodies examined for plague infection.....	2
Bodies found plague infected.....	None.

CLASSIFICATION OF RODENTS.

Mus rattus.....	11
Mus alexandrinus.....	61
Mus morvegicus.....	181
Mus musculus.....	38

WATER FRONT.

Vessels inspected and histories recorded....	11
Vessels fumigated.....	None.
New rat guards installed.....	8
Defective rat guards repaired.....	6
Port sanitary statements issued.....	54

The usual day and night patrol was maintained to enforce rat guarding and fending.

MISCELLANEOUS WORK.

Rat-proofing notices sent to contractors, new buildings.....	16
Letters sent in re-rat complaints.....	10

RODENTS EXAMINED IN EVERETT.

Mus norvegicus trapped.....	51
Mus norvegicus found dead.....	2
Mus rattus trapped.....	1
Mus musculus trapped.....	4

Total.....	58
Rodents examined for plague infection.....	53
Rodents proven plague infected.....	None.

RAT-PROOFING OPERATIONS IN EVERETT.

New buildings inspected.....	6
New buildings, concrete foundations.....	4
New buildings elevated 18 inches.....	2

# PREVALENCE OF DISEASE.

*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.*

## IN CERTAIN STATES AND CITIES.

### RECIPROCAL NOTIFICATION.

#### Minnesota.

*Cases of communicable diseases referred during August, 1915, to other State or provincial health departments by Collaborating Epidemiologist Bracken, of the Minnesota State Board of Health.*

Disease and locality of notification.	Referred to health authority of—	Why referred.
Tuberculosis: Mayo Clinic, Rochester, Olmsted County.	Silvis, Rock Island County, Ill.....	17 active, advanced.
	Oxford, Marquette County, Wis.....	5 moderately advanced.
	Stoughton, Dane County, Wis.....	2 active, incipient.
	Sheldon, Rusk County, Wis.....	2 quiescent cases left Mayo Clinic for homes.
	Superior, Douglas County, Wis.....	
	New Richmond, St. Croix County, Wis....	
	Marengo, Ashland County, Wis.....	
	Cincinnati, Hamilton County, Ohio.....	
	Assiniboine, Saskatchewan, Canada.....	
	Craik, Saskatchewan, Canada.....	
	Butte, Silver Bow County, Mont.....	
	Glendive, Dawson County, Mont.....	
	Dodson, Blaine County, Mont.....	
	Lake Preston, Kingsbury County, S. Dak..	
	Manistique, Schoolcraft County, Mich.....	
	Michigan, Nelson County, N. Dak.....	
	Dazey, Barnes County, N. Dak.....	
	Dubuque, Dubuque County, Iowa.....	
	Lawler, Chickasaw County, Iowa.....	
	Oelwein, Fayette County, Iowa.....	
East Dubuque, Dubuque County, Iowa....		
Albia, Monroe County, Iowa.....		
Decorah, Winneshiek County, Iowa.....		
Trenton, Grundy County, Mo.....		
Greencastle, Sullivan County, Mo.....		
Kansas City, Jackson County, Mo.....		
Volga, Brookings County, S. Dak.....	1 far advanced.	
Clayton, Polk County, Wis.....	2 moderately advanced.	
Lavina, Musselshell County, Mont.....	3 incipient cases left Thomas Hospital for homes.	
Mount Horeb, Dane County, Wis.....		
Newburg, Bottineau County, N. Dak.....		
Mundfordville, Hart County, Ky.....		
Sedalia, Pettis County, Mo.....	Resident of Sedalia, Mo.; died in Minneapolis.	
Ashtabula, Ashtabula County, Ohio.....	Active case left Minneapolis for Ohio.	
McCanna, Grand Forks County, N. Dak...	Advanced case left sana- torium for North Dakota.	
Canton, Lincoln County, S. Dak.....	Moderately advanced case left sanatorium for South Dakota.	
Wilson, St. Croix County, Wis.....	Open case left St. Paul for Wisconsin.	
Billings, Yellowstone County, Mont.....	Open case left St. Paul for Montana.	
Madison, R. F. D. No. 4, Wisconsin.....	Left Minneapolis City Hos- pital August 10 for Wiscon- sin.	
Thomas Hospital, Min- neapolis, Hennepin County.		
Minneapolis Department of Health, Minneapolis, Hennepin County.		
Associated Charities, Minneapolis, Hennepin County.		
Pokegama Sanatorium, Pine County.		
St. Paul Bureau of Health, Ramsey County.		
Typhoid fever: Minneapolis Department of Health, Minneapolis, Hennepin County.		

**CEREBROSPINAL MENINGITIS.**

**State Reports for August, 1915.**

Place.	New cases reported.	Place.	New cases reported.
<b>Indiana:</b>		<b>Montana:</b>	
Howard County.....	1	Cascade County—	
Vanderburg County.....	1	Great Falls.....	1
Total.....	2	<b>Virginia:</b>	
<b>Kansas:</b>		Accomac County.....	1
Osage County.....	1	Albemarle County.....	1
Wyandotte County—		Belford County.....	1
Kansas City.....	1	Culpeper County.....	1
Total.....	2	Elizabeth City County.....	1
<b>Massachusetts:</b>		Essex County.....	1
Bristol County—		Franklin County.....	1
Fall River.....	1	Mecklenburg County.....	1
Essex County—		Prince Edward County.....	2
Lawrence.....	1	Scott County.....	1
Peabody Township.....	2	Smyth County.....	1
<b>Hampden County—</b>		Spottsylvania County.....	1
Chicopee.....	1	Total.....	13
Springfield.....	1	<b>Washington:</b>	
<b>Middlesex County—</b>		Adams County.....	1
Maynard Township.....	1	Pierce County.....	1
<b>Suffolk County—</b>		Total.....	2
Boston.....	2		
<b>Worcester County—</b>			
Berlin Township.....	1		
Total.....	10		

**City Reports for Week Ended September 11, 1915.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Chicago, Ill.....	1		<b>Kansas City, Kans.....</b>	1	
Cleveland, Ohio.....		1	Milwaukee, Wis.....	1	1
Columbus, Ohio.....	1	1	New York, N. Y.....	1	1
Detroit, Mich.....	1	2	Passaic, N. J.....		1
Galveston, Tex.....	1		Wilkes-Barre, Pa.....	1	

**DIPHThERIA.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2953.

**ERYSIPELAS.**

**City Reports for Week Ended September 11, 1915.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Bridgeport, Conn.....	1		Milwaukee, Wis.....	1	
Chicago, Ill.....	9	2	New Castle, Pa.....	1	
Cincinnati, Ohio.....	1		New York, N. Y.....		2
Cleveland, Ohio.....	5		Philadelphia, Pa.....	3	
Detroit, Mich.....		1	Pittsburgh, Pa.....	1	
Kalamazoo, Mich.....	1		St. Louis, Mo.....	2	
Los Angeles, Cal.....	2				

**GONORRHEA.**

**State Reports for August, 1915.**

During the month of August, 1915, cases of gonorrhoea were reported in States as follows: Kansas, 9; Louisiana, 12; Vermont, 70.

**MALARIA.****State Reports for August, 1915.**

During the month of August, 1915, cases of malaria were reported in States as follows: Kansas, 5; Louisiana, 76; Massachusetts, 25; Virginia, 2,015.

**City Reports for Week Ended September 11, 1915.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Cairo, Ill.....		1	New Orleans, La.....		1
Charleston, S. C.....		1	New York, N. Y.....		2
Chicago, Ill.....		1	Orange, N. J.....	1	
East Orange, N. J.....	1		Philadelphia, Pa.....	2	
Hartford, Conn.....	1		Richmond, Va.....	10	
Kansas City, Kans.....	1		Stockton, Cal.....	1	
Little Rock, Ark.....	1		Trenton, N. J.....	3	

**MEASLES.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2593.

**PELLAGRA.****State Reports for August, 1915.**

During the month of August, 1915, cases of pellagra were reported in States, as follows: Kansas, 4; Massachusetts, 4; Virginia, 76.

**City Reports for Week Ended September 11, 1915.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Charleston, S. C.....		7	Philadelphia, Pa.....		2
Mobile, Ala.....		1	Richmond, Va.....		2
Nashville, Tenn.....	69		Wilmington, N. C.....		2
New Orleans, La.....	1	1			

**PLAGUE.****Louisiana—New Orleans—Plague-Infected Rats Found.**

Surgeon Creel reported by telegraph September 24, 1915, that two plague-infected rats had been found in New Orleans, La.; one on Port Street, between Villiere and Urquhart Streets, the other at 2127 South Franklin Street. On September 26 he reported the finding of another plague-infected rat at 2126 Felicity Street

**PNEUMONIA.****City Reports for Week Ended September 11, 1915.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Chicago, Ill.....	44	33	Philadelphia, Pa.....	11	19
Cleveland, Ohio.....	15	9	Pittsburgh, Pa.....	9	11
Erie, Pa.....	1		Rochester, N. Y.....	2	2
Kansas City, Kans.....	1		San Francisco, Cal.....	9	9
Los Angeles, Cal.....	4	4	Toledo, Ohio.....	1	1

**POLIOMYELITIS (INFANTILE PARALYSIS).**

**State Reports for August, 1915.**

Place.	New cases reported.	Place.	New cases reported.
<b>Indiana:</b>		<b>Minnesota:</b>	
Decatur County.....	1	Benton County—	
Lake County.....	6	St. Cloud.....	1
St. Joseph County.....	1	<b>Martin County—</b>	
<b>Total.....</b>	<b>8</b>	Silver Lake Township.....	1
		Swift County—	
<b>Iowa:</b>		Appleton.....	1
Sioux County.....	2	<b>Total.....</b>	<b>3</b>
<b>Louisiana:</b>		<b>Vermont:</b>	
Jackson Parish.....	1	Caledonia County.....	1
Red River Parish.....	2	Chittenden County.....	2
<b>Total.....</b>	<b>3</b>	Franklin County.....	1
		Grand Isle County.....	1
<b>Massachusetts:</b>		Orange County.....	1
Bristol County—		Rutland County.....	1
New Bedford.....	2	Washington County.....	1
Essex County—		Windham County.....	1
Haverhill.....	1	Windsor County.....	2
Hampden County—		<b>Total.....</b>	<b>11</b>
Chicopee.....	1		
Springfield.....	2	<b>Virginia:</b>	
Westfield Township.....	1	Accomac County.....	1
<b>Middlesex County—</b>		Carroll County.....	1
Cambridge.....	1	Halifax County.....	1
Framingham Township.....	1	Lee County.....	2
Lowell.....	2	Mecklenburg County.....	2
Natick Township.....	2	Nansemond County.....	2
Newton.....	1	Prince Edward County.....	2
Somerville.....	1	Richmond County.....	1
<b>Norfolk County—</b>		Smyth County.....	1
Holbrook Township.....	1	Wythe County.....	1
Quincy.....	2	<b>Total.....</b>	<b>14</b>
Sharon Township.....	1		
<b>Plymouth County—</b>		<b>Washington:</b>	
Brockton.....	3	Kittitas County.....	1
Whitman Township.....	1	Yakima County.....	1
Duxbury Township.....	1	<b>Total.....</b>	<b>2</b>
<b>Suffolk County—</b>			
Boston.....	1		
<b>Worcester County—</b>			
Southboro Township.....	1		
Worcester.....	1		
<b>Total.....</b>	<b>27</b>		

**City Reports for Week Ended Sept. 11, 1915.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.....	8	1	Nashville, Tenn.....	1	1
Boston, Mass.....	1		New York, N. Y.....	2	1
Canton, Ohio.....	3		Pittsburgh, Pa.....	1	
Chicago, Ill.....	1		Reading, Pa.....	1	
Cleveland, Ohio.....	9		Rochester, N. Y.....	4	1
East Orange, N. J.....	1		San Francisco, Cal.....	1	
Erie, Pa.....	9		Toledo, Ohio.....	1	

**RABIES.**

**State Reports for August, 1915.**

During the month of August, 1915, cases of rabies in man were reported in States, as follows: Kansas, 3; Massachusetts, 4; Virginia, 2.

**Pennsylvania—Altoona.**

During the week ended September 11, 1915, 1 fatal case of rabies in man was notified in Altoona, Pa.

**ROCKY MOUNTAIN SPOTTED FEVER.****Montana Report for August, 1915.**

During the month of August, 1915, 1 case of Rocky Mountain spotted fever was notified in Ravalli County, Mont.

**SCARLET FEVER.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2953.

**SMALLPOX.****Kansas.**

Collaborating Epidemiologist Bracken reported by telegraph that during the week ended September 25, 1915, two new foci of smallpox were reported in Minnesota, cases of the disease having been notified as follows: Benton County, Saukrapids Township, 4 cases; Faribault County, Winnebago Village, 1 case.

**State Reports for August, 1915.**

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within seven years preceding attack.	Number last vaccinated more than seven years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
<b>Kansas:</b>						
Atchison County—						
Atchison.....	1					1
Barton County.....	1					1
Clay County.....	8				8	
Greenwood County.....	1				1	1
Jefferson County.....	2				1	1
Marshall County.....	6				6	
Morris County.....	6			2	3	1
Morton County.....	7					7
Nemaha County.....	1					1
Osage County.....	1			1		
Sedgwick County—						
Wichita.....	9				1	8
Sumner County.....	3					3
Wilson County.....	2				1	1
<b>Total.....</b>	<b>48</b>			<b>3</b>	<b>21</b>	<b>24</b>
<b>Michigan:</b>						
Calhoun County—						
Battle Creek.....	2				2	
Delta County—						
Gladstone.....	1				1	
Kent County—						
Wyoming Township.....	1				1	
Macomb County—						
Bruce Township.....	1				1	
Manistee County—						
Onekema Township.....	1				1	
Mecosta County—						
Mecosta.....	7				7	
Newaygo County—						
Fremont.....	2				2	
Van Buren County—						
Columbia Township.....	4				4	
<b>Total.....</b>	<b>19</b>				<b>19</b>	

SMALLPOX—Continued.

State Reports for August, 1915—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within seven years preceding attack.	Number last vaccinated more than seven years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
<b>Minnesota:</b>						
Blue Earth County—						
Mankato.....	1					1
Chippewa County—						
Montevideo.....	1				1	
Crow Wing County—						
Crosby.....	1			1		
Faribault County—						
Blue Earth City Town-						
ship.....	1			1		
Brush Creek Township..	2			2		
Minnesota Lake.....	1			1		
Goodhue County—						
Minneola Township.....	4		2		1	1
Grant County—						
Herman.....	1					1
Hennepin County—						
Minneapolis.....	7			1	6	
Kandiyohi County—						
Burbank Township.....	1				1	
Lincoln County—						
Marble Township.....	1					1
Lyon County—						
Fairview Township.....	1					1
Tracy.....	1				1	
McLeod County—						
Stewart.....	1			1		
Martin County—						
Fox Lake Township.....	2				2	
Jay Township.....	6				6	
Sherburne.....	4				4	
Ramsey County—						
St. Paul.....	1		1			
Redwood County—						
Morgan.....	1					1
Sibley County—						
Grafton Township.....	1				1	
Swift County—						
Appleton.....	5				5	
Wabasha County—						
Plainview.....	3					3
<b>Total.....</b>	<b>47</b>		<b>3</b>	<b>7</b>	<b>28</b>	<b>9</b>

Miscellaneous State Reports.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
<b>Illinois (July 1-31):</b>			<b>Illinois (July 1-31)—Contd.</b>		
Adams County—			Crawford County—		
Quincy.....	18		Oblong.....	8	
Calhoun County—			Dekalb County—		
Hamburg.....	1		Sycamore.....	2	
Cass County—			Dewitt County—		
Ashland.....	2		Clinton.....	8	
Beardstown.....	2		Edgar County—		
Christian County—			Brookton.....	1	
Assumption.....	9		Franklin County—		
Coles County—			Cave Township.....	1	
Mattoon.....	1		Eastern Township.....	1	
Cook County—			West Frankfort.....	1	
Chicago.....	2		Jo Daviess County—		
West Hammond.....	1		Woodbine Township..	1	



## SMALLPOX—Continued.

## Miscellaneous State Reports—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Illinois (July 1-31)—Contd.			Illinois (Aug. 1-31)—Contd.		
Henry County—			Dekalb County—		
Geneseo.....	1		Sandwich.....	2	
Kewanee.....	2		Sycamore.....	2	
Jersey County—			Iroquois County—		
Elsah Township.....	1		Concord Township...	2	
Knox County—			Lawrence County—		
Galesburg.....	2		Petty Township.....	1	
Lawrence County—			Lee County—		
Russell Township.....	1		Amboy.....	2	
Lee County—			May Township.....	1	
Amboy.....	2		Madison County—		
Sublette.....	2		Alton.....	9	
McLean County—			Marion County—		
Heyworth.....	1		Centralia.....	1	
McDonough County—			Ogle County—		
Macomb.....	1		Scott Township.....	4	
Macon County—			Randolph County—		
Decatur.....	3		Baldwin.....	1	
Madison County—			Coulterville.....	13	
Alton.....	6		Red Bud Precinct.....	2	
Godfrey.....	1		Rock Island County—		
Collinsville.....	1		Moline.....	3	
Mercer County—			Rock Island.....	4	
Matherville.....	1		Ross Township.....	1	
Viola.....	1		St. Clair County—		
Richland County—			Marissa.....	1	
Parkersburg.....	1		Sangamon County—		
Richmond County—			Springfield.....	5	
Denver Township.....	1		Schuyler County—		
Madison Township.....	1		Frederick Township..	1	
Rock Island County—			Scott County—		
Moline.....	1		Outside municipali-		
Rock Island.....	15		ties.....	8	
Zema Township.....	2		Winchester.....	1	
Sangamon County—			Shelby County—		
Ball Township.....	7		Rural Township.....	1	
Springfield.....	4		Stephenson County—		
Woodside Township..	2		Freeport.....	1	
Shelby County—			Vermillion County—		
Cold Springs Town-			Danville.....	2	
ship.....	1		Wabash County—		
Rural Township.....	1		Mount Carmel.....	5	
Schuyler County—			Warren County—		
Browning.....	1		Monmouth.....	2	
Browning Township..	1		Wayne County—		
Vermilion County—			Mount Erie Township	7	
Blount Township.....	1		Whiteside County—		
Danville.....	5		Colonia Township....	2	
Danville Township..	13		Montmorency Town-		
Grant Township.....	2		ship.....	1	
Westville.....	1		Rock Falls.....	1	
Wabash County—			Total.....	92	
Mount Carmel.....	21				
Outside municipali-			Indiana (Aug. 1-31):		
ties.....	8		Counties—		
Warren County—			Delaware.....	11	
Monmouth.....	3		Elkhart.....	1	1
Wayne County—			Fountain.....	23	
Goldengate.....	2		Gibson.....	16	
Leech Township.....	2		Hendricks.....	5	
Whiteside County—			Jackson.....	2	
Erie.....	2		Knox.....	9	
Montmorency Town-			Lawrence.....	1	
ship.....	1		Madison.....	1	
Rock Falls.....	1		Shelby.....	9	1
Total.....	185		Vanderburgh.....	5	
			Vigo.....	8	
Illinois (Aug. 1-31):			Washington.....	2	
Adams County—			White.....	1	
Quincy.....	3		Total.....	94	2
Bureau County—					
Berlin Township.....	1		Iowa (Aug. 1-31):		
Cass County—			Counties—		
Ashland.....	2		Dallas.....	6	
Christian County—			Fremont.....	1	
Assumption Township.	1		Hardin.....	2	
			Keokuk.....	5	

**SMALLPOX—Continued.**

**Miscellaneous State Reports—Continued.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Iowa (Aug. 1-31—Continued. Counties—Continued.			Vermont (Aug. 1-31): Counties—		
Linn.....	4	.....	Caledonia.....	5	.....
Polk.....	3	.....	Windsor.....	8	.....
Ringgold.....	1	.....	Total.....	13	.....
Sac.....	2	.....	Virginia (Aug. 1-31):		
Scott.....	15	.....	Charlotte County.....	1	.....
Tama.....	4	.....	Nansemond County.....	1	.....
Total.....	43	.....	Shenandoah County.....	4	.....
Montana (Aug. 1-31):			Spotsylvania County—		
Gallatin County.....	1	.....	Fredericksburg.....	5	.....
Lewis and Clark County—			Total.....	11	.....
Helena.....	3	.....	Washington (Aug. 1-31):		
Musselshell County.....	1	.....	Pierce County—		
Silver Bow County.....	4	.....	Tacoma.....	1	.....
Butte.....	7	.....	Spokane County.....	5	.....
Total.....	16	.....	Total.....	6	.....

**City Reports for Week Ended Sept. 11, 1915.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Butte, Mont.....	2	.....	Evansville, Ind.....	1	.....
Cincinnati, Ohio.....	1	.....	Milwaukee, Wis.....	5	.....
Davenport, Iowa.....	3	.....	Portland, Oreg.....	2	.....
Detroit, Mich.....	1	.....	Racine, Wis.....	1	.....
Duluth, Minn.....	1	.....	Toledo, Ohio.....	1	.....

**SYPHILIS.**

**State Reports for August, 1915.**

During the month of August, 1915, cases of syphilis were reported in States, as follows: Kansas, 5; Vermont, 28.

**TETANUS.**

**City Reports for Week Ended September 11, 1915.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Boston, Mass.....	.....	1	St. Louis, Mo.....	1	1
Chicago, Ill.....	.....	2	Toledo, Ohio.....	.....	1
New York, N. Y.....	.....	1	Wheeling, W. Va.....	.....	1

**TUBERCULOSIS.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2953.

## TYPHOID FEVER.

## State Reports for August, 1915.

Place.	New cases reported.	Place.	New cases reported.
<b>Indiana:</b>		<b>Kansas—Continued.</b>	
Adams County.....	1	Gray County.....	2
Cass County.....	8	Greenwood County.....	4
Clark County.....	7	Harper County.....	1
Daviess County.....	3	Harvey County.....	5
Decatur County.....	2	Haskell County.....	1
DeKalb County.....	1	Jewell County.....	3
Delaware County.....	12	Kearny County.....	5
Dubois County.....	3	Kingman County.....	4
Elkhart County.....	6	Labette County.....	3
Fayette County.....	1	Parsons.....	4
Floyd County.....	6	Leavenworth County—	
Fountain County.....	1	Leavenworth.....	2
Franklin County.....	2	Lincoln County.....	2
Fulton County.....	1	Linn County.....	1
Gibson County.....	2	Lyon County.....	1
Grant County.....	1	Marion County.....	2
Greene County.....	3	Marshall County.....	3
Hamilton County.....	8	Meade County.....	2
Hancock County.....	6	Miami County.....	2
Harrison County.....	2	Montgomery County.....	7
Howard County.....	7	Coffeyville.....	2
Huntington County.....	1	Neosho County.....	3
Jackson County.....	4	Ness County.....	1
Jay County.....	1	Norton County.....	2
Jefferson County.....	2	Osborne County.....	1
Jennings County.....	4	Pawnee County.....	13
Johnson County.....	7	Phillips County.....	2
Knox County.....	4	Pratt County.....	2
Lake County.....	4	Rice County.....	2
Laporte County.....	2	Riley County.....	1
Lawrence County.....	3	Sedgwick County.....	1
Marion County.....	42	Wichita.....	11
Martin County.....	1	Seward County.....	2
Miami County.....	3	Shawnee County.....	1
Monroe County.....	2	Topeka.....	6
Montgomery County.....	1	Stafford County.....	3
Morgan County.....	4	Summer County.....	11
Pike County.....	10	Washington County.....	1
Posey County.....	1	Wilson County.....	2
Putnam County.....	12	Wyandotte County—	
Randolph County.....	2	Kansas City.....	6
Ripley County.....	1		
Rush County.....	1	<b>Total.....</b>	<b>176</b>
Scott County.....	2		
Shelby County.....	1	<b>Louisiana:</b>	
Steuben County.....	1	Caddo Parish.....	2
St. Joseph County.....	1	Calcasieu Parish.....	4
Sullivan County.....	1	Caldwell Parish.....	2
Tipton County.....	3	De Soto Parish.....	1
Vanderburgh County.....	16	Evangeline Parish.....	3
Vermillion County.....	2	Iberia Parish.....	11
Warwick County.....	2	Natchitoches Parish.....	1
Washington County.....	15	Sabine Parish.....	1
Wells County.....	3	Tangipahoa Parish.....	1
<b>Total.....</b>	<b>242</b>	<b>Total.....</b>	<b>28</b>
<b>Kansas:</b>		<b>Massachusetts:</b>	
Allen County.....	2	Barnstable County—	
Barber County.....	1	Chatham Township.....	1
Barton County.....	5	Eastham Township.....	1
Bourbon County—		Berkshire County—	
Fort Scott.....	3	Adams Township.....	6
Butler County.....	5	Great Barrington Township.....	1
Chase County.....	1	Lee Township.....	1
Cherokee County.....	4	North Adams.....	4
Cloud County.....	2	Pittsfield.....	2
Coffey County.....	1	Bristol County—	
Comanche County.....	8	Attleboro.....	1
Cowley County.....	4	Easton Township.....	2
Crawford County.....	4	Fall River.....	14
Edwards County.....	1	Mansfield Township.....	1
Elk County.....	1	New Bedford.....	11
Ellsworth County.....	1	Taunton.....	1
Finney County.....	3	Dukes County—	
Franklin County.....	2	Edgartown Township.....	1
Cove County.....	1		

TYPHOID FEVER—Continued.

State Reports for August, 1915—Continued.

Place.	New cases reported.	Place.	New cases reported.
<b>Massachusetts—Continued.</b>		<b>Michigan—Continued.</b>	
Essex County—		Branch County—	
Haverhill.....	3	Coldwater.....	1
Ipswich Township.....	2	Chippewa County—	
Lawrence.....	4	Sault Ste. Marie.....	1
Lynn.....	8	Clinton County—	
Newburyport.....	1	DeWitt Township.....	1
Peabody Township.....	2	Delta County—	
Rockport Township.....	1	Escanaba.....	4
Saugus Township.....	1	Emmett County—	
Hampden County—		Petoskey.....	1
Chicopee.....	3	Gladwin County—	
Holvoke.....	2	Butman Township.....	1
Palmer Township.....	1	Hillsdale County—	
Springfield.....	6	Cambria Township.....	2
Westfield Township.....	1	Somerset Township.....	1
Hampshire County—		Ingham County—	
Hatfield Township.....	2	Webberville.....	1
Northampton.....	2	Lansing.....	1
Middlesex County—		Iron County—	
Acton Township.....	1	Stambaugh.....	1
Arlington Township.....	2	Isabella County—	
Cambridge.....	8	Shepherd.....	1
Lowell.....	15	Jackson County—	
Malden.....	5	Leoni Township.....	1
Marlboro.....	1	Spring Arbor Township.....	1
Medford.....	1	Kent County—	
Melrose.....	1	Caledonia Township.....	1
Natick Township.....	1	Cannon Township.....	1
Newton.....	8	Grand Rapids.....	3
Somerville.....	5	Lapeer County—	
Wakefield Township.....	3	Rich Township.....	3
Waltham.....	10	Imlay City.....	1
Watertown Township.....	1	Lapeer.....	1
Wayland Township.....	1	Lenawee County—	
Wilkinson Township.....	1	Onsted.....	1
Winchester Township.....	1	Livingston County—	
Woburn.....	1	Ocola Township.....	2
Norfolk County—		Mackinac County—	
Braintree Township.....	1	Mackinac Island.....	4
Brookline Township.....	1	Manistee County—	
Milton Township.....	1	Springdale Township.....	1
Norwood Township.....	2	Marquette County—	
Quincy.....	3	Ishpeming.....	1
Weymouth Township.....	2	Negaunee.....	2
Wrentham Township.....	1	Mason County—	
Plymouth County—		Victory Township.....	1
Abington Township.....	1	Ludington.....	2
Brockton.....	1	Mecosta County—	
East Bridgewater Township.....	1	Morton Township.....	1
Plymouth Township.....	2	Missaukee County—	
Suffolk County—		Caldwell Township.....	1
Boston.....	50	Monroe County—	
Chelsea.....	2	Bedford Township.....	1
Revere.....	1	Frenchtown Township.....	1
Worcester County—		Monroe.....	8
Ashburnham Township.....	1	Montcalm County—	
Barre Township.....	1	Greenville.....	1
Fitchburg.....	2	Muskegon County—	
Gardner Township.....	2	Muskegon.....	2
Leominster Township.....	1	Newaygo County—	
Milford Township.....	1	Dayton Township.....	1
Northbridge Township.....	1	Ottawa County—	
Princeton Township.....	1	Chester Township.....	1
Webster Township.....	1	Olive Township.....	1
Worcester.....	3	Ontonagon County—	
Total.....	235	Ontonagon.....	1
		Saginaw County—	
<b>Michigan:</b>		Chapin Township.....	1
Allegan County—		Marion Township.....	1
Otsego.....	1	Saginaw.....	6
Plainwell.....	1	St. Clair County—	
Alpena County—		Cottrellville Township.....	1
Alpena.....	2	Ira Township.....	2
Barry County—		Sanilac County—	
Hope Township.....	1	Delaware Township.....	1
Berrien County—		Elk Township.....	1
Benton Harbor.....	1	Marion Township.....	1
		Sandusky.....	1

## TYPHOID FEVER—Continued.

## State Reports for August, 1915—Continued.

Place.	New cases reported.	Place.	New cases reported.
<b>Michigan—Continued.</b>		<b>Minnesota—Continued.</b>	
Shiawassee County—		Swift County—	
Fairfield Township.....	1	Benson.....	1
Durand.....	1	Wabasha County—	
Tuscola County—		Plainview.....	2
Novesta Township.....	1	Washington County—	
Van Buren County—		Baytown Township.....	1
South Haven Township.....	1	Wilkin County—	
Washtenaw County—		Campbell.....	1
Augusta Township.....	2	Nashua.....	1
Ann Arbor.....	2	Total.....	109
Wayne County—			
Greenfield Township.....	2	<b>Montana:</b>	
St. Clair Heights.....	1	Blaine County.....	1
Wyandotte.....	2	Great Falls.....	2
Wexford County—		Custer County.....	3
Colfax Township.....	1	Dawson County.....	15
Total.....	96	Fergus County.....	2
		Flathead County.....	3
<b>Minnesota:</b>		Kalispell.....	3
Aitkin County—		Gallatin County.....	3
Waldeck Township.....	1	Granite County.....	2
Chippewa County—		Hill County.....	6
Montevideo.....	1	Lewis & Clark County.....	1
Chisago County—		Helena.....	4
Wyoming.....	1	Mineral County.....	3
Clay County—		Park County.....	1
Moorhead.....	1	Richland County.....	2
Cottonwood County—		Rosebud County.....	1
Windom.....	1	Sheridan County.....	8
Westbrook Township.....	1	Stillwater County.....	1
Crow Wing County—		Sweet Grass County.....	2
Brainerd.....	2	Teton County.....	1
Goodhue County—		Yellowstone County.....	2
Roscoe Township.....	1	Billings.....	1
Hennepin County—		Total.....	67
Minneapolis.....	27		
Osseo.....	1	<b>Vermont:</b>	
Itasca County—		Addison County.....	2
Coleraine.....	1	Caledonia County.....	1
Kittson County—		Chittenden County.....	4
Granville Township.....	2	Franklin County.....	3
Koochiching County—		Lamoille County.....	1
Big Falls.....	1	Rutland County.....	8
Mower County—		Windsor County.....	1
Austin.....	1	Total.....	20
Olmsted County—			
Cascade Township.....	1	<b>Virginia:</b>	
Rochester.....	1	Accomac County.....	18
Ottertall County—		Albemarle County.....	11
Fergus Falls.....	1	Alexandria County—	
Pine County—		Alexandria.....	3
Hinckley.....	1	Alleghany County.....	1
Polk County—		Amelia County.....	1
Beltrami.....	1	Amherst County.....	27
Crookston.....	1	Appomattox County.....	10
Ramsey County—		Augusta County.....	20
St. Paul.....	21	Bath County.....	4
Renville County—		Bedford County.....	48
Olivia.....	1	Bland County.....	3
Troy Township.....	1	Botetourt County.....	4
Rice County—		Brunswick County.....	6
Faribault.....	6	Buchanan County.....	5
Forest Township.....	1	Buckingham County.....	5
Walcott Township.....	2	Campbell County.....	11
St. Louis County—		Lynchburg.....	19
Aurora.....	1	Caroline County.....	11
Duluth.....	9	Carroll County.....	2
Franklin Township.....	1	Charlotte County.....	6
Virginia.....	5	Chesterfield County.....	3
Scott County—		Clarke County.....	1
Belle Plaine Borough.....	2	Craig County.....	2
New Market Township.....	1	Culpeper County.....	2
Sibley County—		Dickenson County.....	2
Arlington.....	1	Dinwiddie County.....	9
Henderson.....	1	Petersburg.....	4
Sterns County—			
Holding.....	1		
St. Cloud.....	1		

**TYPHOID FEVER—Continued.**

**State Reports for August, 1915—Continued.**

Place.	New cases reported.	Place.	New cases reported.
<b>Virginia—Continued.</b>		<b>Virginia—Continued.</b>	
Elizabeth City County.....	3	Roanoke County.....	9
Essex County.....	9	Roanoke.....	9
Fairfax County.....	9	Rockbridge County.....	4
Fauquier County.....	4	Rockingham County.....	11
Floyd County.....	5	Russell County.....	3
Fluvanna County.....	5	Scott County.....	13
Franklin County.....	9	Shenandoah County.....	19
Frederick County.....	6	Smyth County.....	6
Gloucester County.....	4	Southampton County.....	15
Goochland County.....	1	Spotsylvania County.....	4
Grayson County.....	8	Fredericksburg.....	3
Greene County.....	1	Stafford County.....	1
Greensville County.....	4	Surry County.....	3
Halifax County.....	8	Sussex County.....	7
Hanover County.....	8	Tazewell County.....	6
Henrico County.....	10	Warren County.....	2
Richmond.....	36	Warwick County—	
Henry County.....	28	Newport News.....	7
Highland County.....	1	Washington County.....	9
Isle of Wight County.....	21	Westmoreland County.....	7
James City County.....	1	Wise County.....	23
King and Queen County.....	7	Wythe County.....	12
King William County.....	2	York County.....	4
Lancaster County.....	6		
Lee County.....	16	<b>Total.....</b>	<b>795</b>
Loudoun County.....	6		
Louisa County.....	2	<b>Washington:</b>	
Lunenburg County.....	7	Adams County.....	1
Madison County.....	4	Benton County.....	3
Mathews County.....	1	Chelan County.....	2
Mecklenburg County.....	6	Clarke County.....	2
Middlesex County.....	2	Columbia County.....	1
Montgomery County.....	8	Douglas County.....	3
Nansemond County.....	4	Grays Harbor County.....	1
Nelson County.....	9	King County.....	3
New Kent County.....	1	Seattle.....	11
Norfolk County.....	17	Kitsap County.....	2
Northampton County.....	10	Kittitas County.....	1
Northumberland County.....	2	Klickitat County.....	2
Notoway County.....	2	Lewis County.....	3
Orange County.....	2	Lincoln County.....	3
Page County.....	4	Okanogan County.....	2
Patrick County.....	3	Pierce County.....	1
Pittsylvania County.....	10	Tacoma.....	3
Danville.....	13	Skagit County.....	2
Powhatan County.....	1	Snohomish County.....	4
Prince Edward County.....	9	Everett.....	10
Prince George County.....	1	Spokane County.....	1
Princess Anne County.....	4	Spokane.....	12
Prince William County.....	5	Stevens County.....	11
Pulaski County.....	5	Thurston County.....	4
Rappahannock County.....	2	Yakima County.....	20
Richmond County.....	3		
		<b>Total.....</b>	<b>113</b>

**City Reports for Week Ended September 11, 1915.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.....	9		Cincinnati, Ohio.....	5	
Alameda, Cal.....	1	1	Cleveland, Ohio.....	10	2
Altoona, Pa.....	2		Columbus, Ohio.....	7	
Baltimore, Md.....	35	5	Cumberland, Md.....	3	
Binghamton, N. Y.....	1		Danville, Ill.....	1	
Boston, Mass.....	12	2	Davenport, Iowa.....	1	
Bridgeport, Conn.....	4	1	Detroit, Mich.....	25	4
Cambridge, Mass.....	3		East Orange, N. J.....	2	1
Camden, N. J.....	2		Evansville, Ind.....	4	
Canton, Ohio.....	2		Everett, Mass.....	1	
Charleston, S. C.....	2		Fall River, Mass.....	6	1
Chelsea, Mass.....	20	2	Galesburg, Ill.....	1	1
Chicago, Ill.....	3		Galveston, Tex.....	2	
Chicago, Ill.....	28	2	Grand Rapids, Mich.....	4	
Chicopee, Mass.....	2				

## TYPHOID FEVER—Continued.

## City Reports for Week Ended September 11, 1915—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Harrisburg, Pa.	7		Oakland, Cal.	1	
Hartford, Conn.	4	1	Orange, N. J.	2	2
Haverhill, Mass.	2		Philadelphia, Pa.	31	3
Jersey City, N. J.	3	1	Pittsburgh, Pa.	13	1
Johnstown, Pa.	1		Pittsfield, Mass.	1	
La Crosse, Wis.		1	Providence, R. I.	6	1
Lancaster, Pa.	1		Reading, Pa.	5	
Lawrence, Mass.	3		Richmond, Va.	6	5
Lexington, Ky.	2		Roanoke, Va.	3	
Lincoln, Neb.	1		Rochester, N. Y.	13	
Little Rock, Ark.	3		Sacramento, Cal.	3	
Lorain, Ohio	3		St. Louis, Mo.	13	1
Los Angeles, Cal.	6		Salt Lake City, Utah	5	
Lowell, Mass.	4	4	San Francisco, Cal.	6	1
Lynchburg, Va.	1	1	Saratoga Springs, N. Y.	2	
Lynn, Mass.	1		Seattle, Wash.	3	0
Malden, Mass.		1	South Bend, Ind.	6	
Medford, Mass.	1		Springfield, Ill.	1	
Milwaukee, Wis.	2	1	Springfield, Mass.	1	1
Mobile, Ala.	3		Stockton, Cal.	1	
Montclair, N. J.	1		Tacoma, Wash.	2	
Morristown, N. J.	8		Taunton, Mass.	1	
New Bedford, Mass.	5		Toledo, Ohio.	26	1
New Britain, Conn.	3		Trenton, N. J.	1	2
New Castle, Pa.	1		Wheeling, W. Va.		2
New Haven, Conn.	2		Wilkes-Barre, Pa.	2	
New Orleans, La.	3	2	Williamsport, Pa.	2	
Newport, R. I.	1		Wilmington, N. C.	1	
Newton, Mass.	1		Worcester, Mass.	3	
New York, N. Y.	75	11	Zanesville, Ohio.	1	
Norristown, Pa.	1				

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

## State Reports for August, 1915.

State.	Cases reported.			State.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.		Diphtheria.	Measles.	Scarlet fever.
Indiana	124	54	124	Minnesota	136	46	113
Iowa	14		10	Montana	9	22	3
Kansas	83	75	48	Vermont	23	15	10
Louisiana	7	2	3	Virginia	289	52	60
Massachusetts	521	331	251	Washington	34	21	25
Michigan	165	42	82				

## City Reports for Week Ended Sept. 11, 1915.

Cities.	Population as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	584,605	165	16	5	3		13		32	13
Boston, Mass.	745,139	204	46	1	16		24		36	13
Chicago, Ill.	2,447,045	1,424	88	10	38	1	27		237	62
Cleveland, Ohio.	656,975	182	29	3	10	4	10		25	16
Detroit, Mich.	554,717	137	28		1		3		37	5
New York, N. Y.	5,468,190	1,355	150	15	78	10	42	1	228	162
Philadelphia, Pa.	1,683,664	473	41	5	25	2	12		72	52
Pittsburgh, Pa.	571,984	145	29		16		16		17	14
St. Louis, Mo.	745,988	190	58	3	2				41	16

<sup>1</sup> Including 812 Eastland deaths.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended Sept. 11, 1915—Continued.

Cities.	Popula- tion as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 300,000 to 500,000 inhabit- ants:										
Buffalo, N. Y.	461,335	138	7	3	17	2	1	4	30	9
Cincinnati, Ohio	406,706	100	18		4		4	16	15	
Jersey City, N. J.	300,133	86	23		4		3	19	10	
Los Angeles, Cal.	465,397	91	13		1		6	41	22	
Milwaukee, Wis.	428,062	84	6	2	2		2	10	3	
New Orleans, La.	366,484	114	49	2			1	14	13	
San Francisco, Cal.	1 416,912	154	12		2		5	27	15	
Seattle, Wash.	330,834	35			2			5	1	
From 200,000 to 300,000 inhabit- ants:										
Columbus, Ohio	209,722	70	16				3	7	8	
Portland, Oreg.	272,833	40	4	1			1	2	3	
Providence, R. I.	250,025	58	11	1	1		5	6	6	
Rochester, N. Y.	250,747	62	4		4		1	8	4	
From 100,000 to 200,000 inhabit- ants:										
Bridgeport, Conn.	118,434	33	4	1			1	3	1	
Cambridge, Mass.	111,669	29	2		1		4	5	5	
Camden, N. J.	104,349		5					2		
Fall River, Mass.	126,904	34	2	1	5			6	1	
Grand Rapids, Mich.	125,759	24	5	1			4	5		
Hartford, Conn.	108,969	42	3		1			6	1	
Lowell, Mass.	112,124	37	4	1	1			4	4	
Lynn, Mass.	100,316	22	2		2		2	3	2	
Nashville, Tenn.	115,978	44						1	9	
New Bedford, Mass.	114,694	34	4		1		1	7	3	
New Haven, Conn.	147,095		6				1	10	1	
Oakland, Cal.	190,803	7	2					3	3	
Reading, Pa.	105,094	28	3		5			1	1	
Richmond, Va.	154,674	49	1				1	6	2	
Salt Lake City, Utah	113,567	25	1	1	1					
Springfield, Mass.	103,216	19	3		1			4	1	
Toledo, Ohio	187,840	58	6	1	1		4	6	3	
Trenton, N. J.	109,212	36	3		8	1	1	3	3	
Worcester, Mass.	160,523	46	4				1	3	2	
From 50,000 to 100,000 inhabit- ants:										
Akron, Ohio	82,958	49	2				2		2	
Altoona, Pa.	57,606	14							1	
Atlantic City, N. J.	55,806	8	1		1			1		
Bayonne, N. J.	67,582		2					3		
Berkeley, Cal.	54,879	7					1	1		
Binghamton, N. Y.	53,082	16	5					1		
Brockton, Mass.	65,746	16	2		5		1	5	2	
Canton, Ohio	59,139	11					1			
Charleston, S. C.	60,427	27	3					1	1	
Duluth, Minn.	91,913			1			1	1	3	
Erie, Pa.	73,798		4		1			4		
Evansville, Ind.	72,125	19	2				1		3	
Harrisburg, Pa.	70,754	20	1				1			
Johnstown, Pa.	66,585	24	2					5		
Kansas City, Kans.	96,854		1		4		1	4	1	
Lancaster, Pa.	50,289		3							
Lawrence, Mass.	98,197	18	3		1	1	4	11		
Little Rock, Ark.	55,158	27	1				1			
Malden, Mass.	50,087	14	4		1		5		1	
Manchester, N. H.	76,959	26								
Mobile, Ala.	56,536	16							3	
New Britain, Conn.	52,203		3							
Passaic, N. J.	69,010	23	1		3		3	3	2	
Pawtucket, R. I.	58,156	14	2						1	
Rockford, Ill.	53,761	12	1						1	
Sacramento, Cal.	64,836		1						3	
San Diego, Cal.	51,115	23	1						2	
Somerville, Mass.	85,460	12	4				4	3		
South Bend, Ind.	67,030		4						1	
Springfield, Ill.	59,468	18	6				6			
Wilkes-Barre, Pa.	75,218	32			2		1	2	2	
From 25,000 to 50,000 inhabitants:										
Alameda, Cal.	27,031	10			1			1	2	
Brookline, Mass.	31,934	8	2	1				4		
Butler, Pa.	26,587	5								

<sup>1</sup> Population Apr. 15, 1910; no estimate made.



## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended Sept. 11, 1915—Continued.

Cities.	Popula- tion as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabit- ants—Continued.										
Butte, Mont.....	42,918	16							1	
Chelsea, Mass.....	32,452	15				1				
Chicopee, Mass.....	28,688	5								
Cumberland, Md.....	25,564	9								
Danville, Ill.....	31,554	4				1				
Davenport, Iowa.....	47,127		2							
East Orange, N. J.....	41,155	5	2						3	
Elgin, Ill.....	27,844	7							1	3
Everett, Mass.....	38,307	3							1	1
Fitchburg, Mass.....	41,144	13	3			1		1		
Galveston, Tex.....	41,076	13	2							2
Haverhill, Mass.....	47,774	14	3	1		1				1
Kalamazoo, Mich.....	47,364	15	1						3	
Kenosha, Wis.....	30,319	7			1					1
La Crosse, Wis.....	31,522		1		1		2		2	1
Lexington, Ky.....	39,703	13								1
Lima, Ohio.....	34,644	7	2							1
Lincoln, Nebr.....	46,028	10	3			2				
Lorain, Ohio.....	35,662	8	3			1			1	
Lynchburg, Va.....	32,385	14	2			2				3
Madison, Wis.....	30,084				5				1	
Medford, Mass.....	25,737	11	1			1		1	1	1
Montclair, N. J.....	25,550	6	3							
New Castle, Pa.....	40,351		1			1				
Newport, Ky.....	31,722	7	1			1			2	2
Newport, R. I.....	29,631	11	1							
Newton, Mass.....	43,085	11							2	2
Niagara Falls, N. Y.....	36,240	12							2	
Norristown, Pa.....	30,833	8				1				2
Ogden, Utah.....	30,466	5				1				
Orange, N. J.....	32,524	7							3	
Pasadena, Cal.....	43,859	5	1							2
Perth Amboy, N. J.....	39,725		9						2	
Pittsfield, Mass.....	37,580	6							3	
Racine, Wis.....	45,507	8	4		1					
Roanoke, Va.....	41,929	3	11						2	
Rock Island, Ill.....	27,961	9				1				1
Stuebenville, Ohio.....	26,631	13	1			3				
Stockton, Cal.....	34,508		1			2				
Superior, Wis.....	45,285	11				1				
Taunton, Mass.....	35,957	10			3					2
Waltham, Mass.....	30,129	9	6	1						1
West Hoboken, N. J.....	41,893	1	2		1					
Wheeling, W. Va.....	43,097	18	1			1				2
Williamsport, Pa.....	33,495	12	1							
Wilmington, N. C.....	28,264	13	2							2
From 10,000 to 25,000 inhabit- ants:										
Ann Arbor, Mich.....	11,979	9	1							
Cairo, Ill.....	15,593	4								
Clinton, Mass.....	13,075	5	1						1	1
Concord, N. H.....	22,480	7								
Galesburg, Ill.....	23,923	11								
Harrison, N. J.....	16,555								1	
Kearney, N. J.....	22,753	7	3	1				2		
Key West, Fla.....	21,437	8				1				1
Melrose, Mass.....	17,166	4	1							
Morristown, N. J.....	13,158	3								
Muscatine, Iowa.....	17,287	5								
Nanticoke, Pa.....	22,441	6							1	
Newburyport, Mass.....	15,195	1	1							
New London, Conn.....	20,771	6			1					1
North Adams, Mass.....	22,019	7	1		1					
Northampton, Mass.....	19,846	4	1						1	
Rutland, Vt.....	14,624	10								
Saratoga Springs, N. Y.....	12,842	5								
Steelton, Pa.....	15,337	2				1				
Woburn, Mass.....	15,862	7								2

<sup>1</sup> Population April 15, 1910; no estimate made.

# FOREIGN REPORTS.

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## AUSTRIA-HUNGARY.

### Cholera.

Cholera has been notified in Austria-Hungary as follows:

*Bosnia-Herzegovina*.—July 11–17, 1915, 40 cases with 30 deaths.

*Croatia-Slavonia*.—July 19–26, 1915, 320 cases with 157 deaths.

*Hungary*.—July 19–25, 1915, 434 cases with 240 deaths.

### Cholera Carriers.

During the period from July 11 to 17, 1915, 20 cholera carriers were found in Bosnia-Herzegovina.

### Typhus Fever.

During the two weeks ended July 31, 1915, 589 cases of typhus fever were notified in Austria.

## BERMUDA.

### Notification of Infectious Diseases.

Regulations for the notification of infectious diseases were adopted by the general board of health of Bermuda, August 20, 1915, and approved by the governor in council, August 24, 1915. The diseases required to be notified are as follows:

Plague.	Whoopingcough (until it becomes epidemic).
Cholera.	Scarlet fever.
Diphtheria.	Yellow fever.
Leprosy.	Typhus fever.
Measles (until it becomes epidemic).	Typhoid fever.
Smallpox.	Dengue (until it becomes epidemic).
Tubercle of the lung.	

## BRAZIL.

### Health Conditions in Certain Cities.

During the year 1914 health conditions were reported in certain cities in Brazil as follows:

RIO DE JANEIRO.

There were notified in Rio de Janeiro, during the year 1914, 23,054 deaths, occurring from the following-named causes:

Plague.....	1	Tetanus, lockjaw.....	181
Smallpox.....	1,230	Mycosis.....	1
Measles.....	218	Acute or chronic alcoholism.....	86
Diphtheria and croup.....	65	General ailments.....	201
Whoopingcough.....	264	Affections of the nervous system.....	1,427
Scarlet fever.....	1	Affections of the circulatory system.....	2,391
Grippe.....	747	Affections of the respiratory system.....	2,368
Typhoid fever.....	100	Affections of the digestive system.....	4,711
Dysentery.....	178	Affections of the urinary system.....	604
Beriberi.....	11	Affections of the genital system.....	34
Leprosy.....	29	Septicemia puerperal.....	84
Erysipelas.....	49	Other puerperal ailments.....	84
Other epidemic diseases.....	2	Affections of the skin.....	95
Acute malaria.....	126	Affections of the bones and of the organs of locomotion.....	13
Chronic malaria.....	187	Diseases of infancy and malformation.....	909
Pulmonary tuberculosis.....	4,118	Old age.....	191
Cerebrospinal meningitis.....	66	Violent deaths, except suicides..	815
Other forms of tuberculosis.....	186	Suicides.....	158
Septicemia.....	170	Diseases unknown or ill-defined.....	297
Carbuncles.....	1		
Hydrophobia.....	6		
Syphilis.....	225		
Soft chancre.....	6		
Cancer and other malignant tumors.....	404		
Other tumors.....	14		
		<b>Total.....</b>	<b>23,054</b>

Estimated population in 1914, 984,370.

BAHIA.

Deaths at Bahia in 1913 and 1914.

	1913	1914
Diphtheria.....	3	7
Measles.....	1	75
Plague.....	115	76
Scarlet fever.....	1	.....
Smallpox.....	1	.....
Tuberculosis.....	792	748
Typhoid fever.....	14	17
Yellow fever.....	50	66
<b>Total.....</b>	<b>977</b>	<b>989</b>

The population of the city of Bahia is estimated as 310,000.

Most of the deaths above reported from yellow fever in 1914 occurred during the first six months of the year. During the very dry period of the first four months of the present year few cases of yellow fever occurred.

**CHINA.****Examination of Rats—Shanghai.**

During the week ended August 14, 1915, 214 rats were examined at Shanghai. No plague infection was found.

**GERMANY.****Cholera.**

During the week ended August 14, 1915, 172 cases of cholera with 28 deaths were notified in Germany. Of these, 4 cases with 4 deaths occurred among the civil population, 144 cases with 23 deaths among prisoners of war, and 24 cases with 1 death among German soldiers.

**MAURITIUS.****Declared Free From Plague.**

The Island of Mauritius has been declared to have been free from plague since June 15, 1915.

**TYPHUS FEVER.****Reports Received During Week Ended Oct. 1, 1915.<sup>1</sup>**

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Austria.....	July 18-31.....	589		
Hungary—				
Budapest.....	July 25-31.....	3		
Dominican Republic:				
Santo Domingo.....	Aug. 18-31.....		1	
Dutch East Indies:				
Java.....	July 25-31.....	5		
Batavia.....	do.....	17	2	
Germany.....	Aug. 8-14.....	1		Military. Present among prisoners of war.
Great Britain and Ireland:				
Cork.....	Aug. 22-28.....	1		
Greece:				
Saloniki.....	Aug. 8-21.....		24	
Russia:				
Petrograd.....	Aug. 1-7.....	1		
Turkey in Asia:				
Beirut.....	Aug. 8-14.....	2	1	
Jaffa.....	July 25-31.....			Present in vicinity.

**Reports Received from June 26 to Sept. 24, 1915.**

Austria-Hungary:				
Austria.....	Apr. 25-May 22....	1,212		Mainly among soldiers, prisoners of war, and persons from Galicia; 6 among the civil population, of which 1 in Vienna.
Do.....	June 6-July 17....	2,901		
Bosnia-Herzegovina.....	May 2-15.....	64		Mainly among military.
Hungary—				
Budapest.....	May 16-July 17....	18	6	
Azores:				
Terceira.....	May 23-29.....	1		July 24, 1915; present.
Canada:				
Ontario—				
Kingston.....	Aug. 22-28.....	1	1	
Canary Islands:				
Santa Cruz de Tenerife....	May 16-June 19....		2	
China:				
Antung.....	June 28-July 4....	1		
Hankow.....	July 4-10.....		1	
Harbin.....	July 5-11.....	1		
Hungtaohotze Station.....	Apr. 19-25.....	1		On Eastern Chinese Ry.
Mukden.....	June 6-July 3....			Present.
Tientsin.....	do.....		1	

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources.

## TYPHUS FEVER—Continued.

## Reports Received from June 26 to Sept. 24, 1915—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Cuba:				
Santiago.....	July 4-10.....	2	2	
Curacao.....	Aug. 8-14.....	4	1	
Dominican Republic:				
Santo Domingo.....	July 19-31.....	.....	1	
Dutch East Indies:				
Java.....	Apr. 25-July 24..	63	10	
Batavia.....	June 6-July 10..	35	7	
Egypt:				
Alexandria.....	May 21-Aug. 12..	142	42	
Cairo.....	May 7-July 15..	251	259	
Port Said.....	do.....	10	8	
France:				
La Rochelle.....	July 11-17.....	1	1	
Germany.....	May 16-22.....	12	.....	In German soldiers and 1 prison- camp employee, among pris- oners of war in 14 districts and in Saxony and Hesse.
Do.....	June 6-26.....	33	.....	Among military: Present in pris- on camps.
Do.....	June 27-July 31	122	.....	
Aix la Chapelle.....	May 30-June 5..	.....	1	
Bavaria.....	July 11-Aug. 7..	3	.....	
Bremen.....	May 30-June 12..	1	1	
Breslau.....	May 30-Aug. 7..	6	.....	
Bromberg—				
Government district.....	July 18-21.....	1	.....	
Cassel—				
Government district.....	do.....	1	.....	
Erfurt—				
Government district.....	July 11-17.....	1	.....	
Frankfort—				
Government district.....	July 18-21.....	1	.....	
Hamburg.....	July 25-31.....	1	1	
Konigsberg.....	June 6-12.....	3	.....	
Leipzig.....	do.....	.....	1	
Merseburg—				
Government district.....	July 25-31.....	1	.....	
Saxe-Weimar.....	July 11-17.....	10	.....	At Jena.
Saxony.....	July 18-24.....	27	.....	
Stettin—				
Government district.....	July 25-31.....	1	.....	
Great Britain and Ireland:				
Dublin.....	May 23-July 31..	7	.....	
Glasgow.....	May 29-Aug. 21..	3	.....	
Newcastle.....	June 27-July 3..	1	.....	
Greece:				
Athens.....	June 14-July 19..	.....	4	
Saloniki.....	May 30-July 17..	.....	21	
Italy:				
Florence.....	May 1-31.....	5	1	
Turin.....	May 17-23.....	1	.....	
Japan:				
Tokyo.....	June 7-13.....	2	.....	
Mexico:				
Aguascalientes.....	June 21-27.....	.....	1	
Mexico City.....	Aug. 28.....	1	1	
Russia:				
Moscow.....	May 2-Aug. 7..	311	61	
Petrograd.....	May 9-July 10..	17	4	
Riga.....	Mar. 1-31.....	1	1	
Do.....	June 6-12.....	1	.....	
Vladivostok.....	June 15-July 14..	2	1	
Warsaw.....	.....	.....	.....	
Serbia.....	Apr. 27.....	.....	.....	Sept. 27-Oct. 31, 1914: Cases, 31; Nov. 1-23, 1914: Cases, 31; deaths, 1. Maximum inci- dence, Nov. 22-28: Cases, 20; deaths, 1.
Spain:				Prevalent.
Madrid.....	June 1-30.....	.....	1	
Switzerland:				
St. Gall.....	July 25-31.....	1	.....	
Zurich.....	May 30-July 10..	2	.....	
Turkey in Asia:				
Adana.....	May 9-July 10..	.....	.....	Present.
Boirut.....	May 27-June 2..	2	1	June 1-30, 1915: Present.
Harput.....	Apr. 1-30.....	.....	.....	Present.
Jaffa.....	Apr. 25-July 17..	17	9	
Mesina.....	May 9-29.....	2	2	
Tarsus.....	May 9-July 10..	.....	.....	
Trebizond.....	.....	.....	.....	Do.
Tripoli.....	May 9-15.....	1	1	Oct., 1914-May 22, 1915: 6,000 fatal cases (estimated).

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.****Reports Received During Week Ended Oct. 1, 1915.<sup>1</sup>****CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Dutch East Indies:</b>				
Java—				
Batavia .....	July 25-31 .....	3	2	
<b>Germany:</b>				
Arnsberg, Government district .....	Aug. 8-14 .....	1		Aug. 8-14, 1915: Cases, 172; deaths, 28. Of these: Civil population, cases, 4, deaths, 4; soldiers, cases, 24, deaths, 1; prisoners of war, cases, 144, deaths, 23.
Breslau, Government district .....	do. ....	2		
Danzig-Troyl .....	do. ....	4	3	
Frankfort, Government district .....	do. ....	1	1	
Hamburg .....	do. ....	1		
Köln, Government district .....	do. ....	1	1	
Liegnitz, Government district .....	do. ....	8	3	
Marienwerder, Government district .....	do. ....	130	18	
Merseburg, Government district .....	do. ....	12		
Oppeln, Government district .....	do. ....	10	1	
Stettin, Government district .....	do. ....	2	1	
<b>India:</b>				
Akyab .....	July 18-24 .....		1	
Bassein .....	July 25-31 .....		5	
Bombay .....	Aug. 8-14 .....	1	1	
Madras .....	do. ....	2	1	
Rangoon .....	July 25-31 .....	2	2	
<b>Indo-China:</b>				
Saigon .....	Aug. 2-8 .....	7	5	
<b>Straits Settlements:</b>				
Singapore .....	July 25-31 .....	2	2	

**PLAGUE.**

<b>China:</b>					
Amoy .....	Aug. 1-7 .....			Present.	
<b>Dutch East Indies:</b>					
Java—					
Kediri district .....	July 18-24 .....	43	39		
Paseroean district .....	July 2-15 .....	25	23		
Surabaya district .....	do. ....	7	5		
Surakarta district .....	do. ....	9	9		
	do. ....	2	2		
<b>Egypt:</b>					
Port Said .....	Aug. 13-19 .....	1	1		
<b>India:</b>					
Bassein .....	July 25-31 .....		1		
Bombay .....	Aug. 8-14 .....	9	6		
Karachi .....	do. ....	1	1		
Mandalay .....	July 19-31 .....		9		
Rangoon .....	July 25-Aug. 7 .....	31	33		
<b>Peru:</b>					
Mollendo .....	July 5-25 .....	1			
<b>Straits Settlements:</b>					
Singapore .....	July 25-31 .....	1	1		

**SMALLPOX.**

<b>Australia:</b>				
Newcastle district—				
Cessnock .....	Aug. 2 .....	1		
Islington .....	Aug. 13-19 .....	1		
Moreweather .....	do. ....	1		
Wickham .....	do. ....	1		
<b>Austria-Hungary:</b>				
Austria .....	July 18-24 .....	705		
<b>Hungary—</b>				
Prague .....	Aug. 14-21 .....	1		

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources.

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

## Reports Received During Week Ended Oct. 1, 1915—Continued.

## SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy.....	Aug. 1-7.....			Present.
Dutch East Indies:				
Java.....	July 25-31.....	42	7	
Germany:				
Potsdam.....	Aug. 8-14.....	1		Military.
India:				
Bombay.....	Aug. 8-14.....	9	5	
Madras.....	do.....	4	2	
Mandalay.....	July 18-24.....		1	
Rangoon.....	July 25-Aug. 7.....	10		
Italy:				
Turin.....	Aug. 23-29.....	2		
Mexico:				
Aguascalientes.....	Aug. 30-Sept. 5.....		1	
Columbia.....	Sept. 15.....	2		
Monterey.....	Aug. 30-Sept. 5.....	1		
Tampico.....	Aug. 11-20.....		1	
Russia:				
Petrograd.....	Aug. 1-2.....	18	10	
Spain:				
Valencia.....	Aug. 29-Sept. 4.....	8	1	
Turkey in Asia:				
Beirut.....	Aug. 8-14.....	6	3	

## Reports Received from June 26 to Sept. 24, 1915.

## CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Austria.....	May 2-July 17.....	3,433	1,141	July 3-17, 1915: 5 cases in Galicia.
Vienna.....	May 9-15.....	9	3	Among soldiers and prisoners.
Trieste.....	June 27-Aug. 7.....	12	5	4 carriers.
Bosnia-Herzegovina.....	Apr. 25-July 3.....	216	71	202 cholera carriers.
Croatia-Slavonia.....	May 3-July 19.....	558	207	14 among soldiers.
Hungary.....	Apr. 26-July 11.....	1,179	518	May 16-23: 5 additional cases notified.
Budapest.....	June 28-July 10.....	2		
Borneo:				
Sandakan.....	July 18-31.....	7	5	Within jail limits.
Ceylon:				
Colombo.....	Apr. 25-May 22.....	8	1	
China:				
Hongkong.....	May 2-8.....	1	1	
Dutch East Indies:				
Java—				
Batavia.....	Apr. 25-July 24.....	62	55	Sept. 3, 1915: Epidemic.
Germany.....	July 24-Aug. 7.....	230	26	
Berlin.....	July 18-Aug. 7.....	3	2	Among soldiers.
Berlitz.....	July 18-24.....	1		Do.
Brandenburg on the Oder.....	Aug. 15-21.....	2	1	
Breslau.....	July 18-Aug. 7.....	4		3 military.
Bromberg.....	July 25-31.....	1		Among soldiers.
Cannstatt.....	do.....	1		Do.
Danzig.....	July 18-Aug. 7.....	2	1	
Frankfort on the Oder.....	Aug. 22-28.....	2		
Furstenwalde and Klotsch.....	Aug. 8-14.....	4	4	Aug. 15-21, 1915; 1 case, at Klotsch.
Hamburg.....	Aug. 1-7.....	3		
Hanover.....	July 25-31.....	1		Among soldiers.
Jagerndorf.....	June 13-July 2.....	1		
Landsberg.....	July 25-31.....	1		Do.
Leipzig.....	do.....	1		Do.
Patschkau.....	July 18-24.....	1		Do.
Posen.....	July 25-31.....	1		Do.
Rosenberg.....	June 13-July 2.....	1		
Sachsenhausen.....	do.....	1	1	
Schneidemuhl.....	July 25-31.....	1		Do.
Silesia.....	July 3-17.....	5		
Slaventzitz.....	June 13-July 2.....	1		
Sommerfeld.....	July 18-24.....	1		Do.
Spandau.....	July 25-31.....	1		Do.
Striegan.....	July 18-24.....	1	1	Do.

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received from June 26 to Sept. 24, 1915—Continued.****CHOLERA—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Germany—Continued.</b>				
Government districts—				
Arnsberg .....	Aug. 1-7 .....	2	1	
Breslau .....	June 13-July 24 .....	4		
Gumbinnen .....	do .....	1		
Konigsberg .....	do .....	2		
Liegnitz .....	do .....	1		
Luneburg .....	Aug. 1-7 .....	1	1	
Magdeburg .....	do .....	1		
Marienwerder .....	June 13-Aug. 7 .....	143	34	
Minden .....	Aug. 1-7 .....	2	1	
Oppeln .....	June 13-Aug. 7 .....	10		
Potsdam .....	do .....	3		
Stade .....	Aug. 1-7 .....	2		
Stettin .....	do .....	1		
Wiesbaden .....	June 13-Aug. 7 .....	1		
<b>India:</b>				
Akyab .....	May 16-July 17 .....		5	
Bassain .....	Apr. 18-July 17 .....		29	
Bombay .....	June 6-Aug. 7 .....	6	5	
Calcutta .....	Apr. 25-July 10 .....		187	
Karachi .....	Aug. 1-7 .....	1	1	
Madras .....	May 2-Aug. 7 .....	9	8	
Pegu .....	July 4-10 .....	1		
Rangoon .....	Apr. 24-July 24 .....	13	13	
<b>Indo-China</b>				
Provinces—				
Anam .....	Jan. 1-Feb. 28 .....	9	5	
Cochin China .....	do .....	621	297	
Laos .....	Feb. 1-28 .....	46	21	
Tonkin .....	Jan. 1-Feb. 28 .....	84	39	
Saigon .....	May 2-July 31 .....	1,307	821	
<b>Italy:</b>				
Leghorn .....	Aug. 11 .....	1		
Venice .....	do .....	3		
<b>Russia:</b>				
Moscow .....	June 6-12 .....	75	14	
Serbia .....	June 25-July 2 .....	2		
<b>Siam:</b>				
Bangkok .....	Apr. 19-July 10 .....		6	
<b>Straits Settlements:</b>				
Singapore .....	May 9-June 12 .....	2	1	
Sumatra, island— Toba district .....	Apr. 12-June 26 .....	159	110	

Jan. 1-31, 1915; Cases, 281; deaths, 178.

**YELLOW FEVER.**

<b>Brazil:</b>				
Bahia .....	July 11-17 .....	1	1	

**PLAGUE.**

<b>Azores:</b>				
Terceira, island .....	July 25 .....			Present.
Bahrain, island .....	Apr. 1-30 .....			Do.
<b>Brazil:</b>				
Bahia .....	June 20-Aug. 7 .....	5	4	
<b>Ceylon:</b>				
Colombo .....	May 9-Aug. 7 .....	10	9	
<b>China:</b>				
Amoy .....	May 2-June 5 .....			Present. Present in Sio-Khe Valley, 60 miles inland.
Do .....	June 13-19 .....			Increasing.
Do .....	June 20-26 .....			40 deaths daily (estimated). At Kulangsu, international settlement, 1 case.
Do .....	June 27-July 10 .....			Present. July 4-17, 1915: Cases, 95 (estimated).
Hongkong .....	May 9-July 17 .....	57	51	



**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.**

**Reports Received from June 26 to Sept. 24, 1915—Continued.**

**PLAGUE—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Cuba:				
Habana.....	Aug. 15.....	1		
Dutch East Indies:				
Java.....				Jan. 1-Feb. 25, 1915: Cases, 2,094; deaths, 1,864.
Do.....	Mar. 12-July 10.....	2, 115	1, 015	
Kediri residency.....	do.....	37	32	
Madioen residency.....	do.....	5	5	
Paseroean residency.....	do.....	29	26	
Surabaya residency.....	do.....	14	14	
Surakarta residency.....	do.....	2	2	
Surabaya.....	Apr. 18-July 17.....	24	23	
Ecuador:				
Guayaquil.....	May 1-31.....	1		
Egypt.....				Jan. 1-May 20, 1915; Cases, 93; deaths, 48. Jan. 1-July 15, 1915; Cases, 188. Corresponding period, 1914: Cases, 157.
Alexandria.....	May 21-27.....		1	
Assiout, province.....	May 14-June 3.....	7	2	
Fayoum, province.....	May 14-Aug. 12.....	52	9	
Galioubeh, province.....	May 14-27.....	1		
Minieh, province.....	May 14-July 15.....	14	5	
Port Said.....	May 28-Aug. 5.....	10	3	
Greece:				
Zante.....	Aug. 1-11.....	12	13	
India:				
Bassein.....	Apr. 18-July 24.....		66	
Bombay.....	May 2-Aug. 7.....	168	150	
Calcutta.....	Apr. 25-July 3.....		59	
Henzada.....	May 2-8.....	1		
Karachi.....	May 2-July 31.....	619	534	
Mandalay.....	Apr. 25-July 17.....		8	
Moulmein.....	May 23-July 24.....		9	
Myingyan.....	Apr. 5-17.....		1	
Pegu.....	Apr. 18-May 1.....		5	
Rangoon.....	Apr. 18-July 24.....	192	157	Apr. 1-May 31, 1915: Cases, 94; deaths, 92.
Toungoo.....	Apr. 25-May 1.....		38	
Indo-China:				
Provinces—				
Anam.....	Jan. 1-Feb. 28.....	62	54	
Cambodia.....	do.....	37	34	
Cochin China.....	do.....	40	19	
Laos.....	Feb. 1-28.....	20	20	
Saigon.....	May 9-July 17.....	12	8	Jan. 1-31, 1915: Cases, 73; deaths, 58.
Japan:				
Taiwan Island—				
Kagi.....	May 30-July 3.....	7	7	
Tokyo.....	May 31-Aug. 8.....	9	5	
Mauritius.....	June 14.....	1		
Persia:				
Mohammerah.....	Apr. 10-June 1.....	3		
Peru:				
Callao.....	May 3-9.....	1		
Lima (city).....	do.....	1		
Mollendo.....	do.....	1		
Salaverry.....	Apr. 26-May 27.....	2		May 30. Vicinity.
Trujillo.....	May 3-9.....	2		May 30, 7 cases in hospital.
Siam:				
Bangkok.....	July 4-10.....	1		
Straits Settlements:				
Singapore.....	Apr. 25-June 5.....	4	1	
Turkey in Asia:				
Bagdad.....	May 2-July 26.....	768	574	
Chios, island.....	Aug. 6.....			Present.
Union of South Africa:				
Cape Province—				
Tarka, district.....	June 2-16.....	2	1	
Wodehouse, district.....	June 5.....	2	2	At Dordrecht.
Zanzibar:				
Zanzibar.....	Mar. 1-31.....		1	

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

## Reports Received from June 26 to Sept. 24, 1915—Continued.

## SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Australia:</b>				
New South Wales—				
New Castle District.....				June 10-Aug. 5: Cases, 17.
Cessnock.....	June 10-July 1.....	4		
Hamilton.....	July 16-22.....	1		
Kurri Kurri.....	May 26-July 22.....	8		
Plattsburg.....	July 16-22.....	1		
Standford Morthyr.....	June 25-July 24.....	1		
Victoria—				
Melbourne.....	Apr. 20.....	1		At Point Nepean quarantine station, from S. S. Lord Derby from Rangoon.
Western Australia—				
Fremantle.....	Apr. 27.....	1		At Woodmans Point quarantine station, from S. S. City of Baroda from Calcutta via Colombo.
<b>Austria-Hungary:</b>				
Austria.....				
Dalmatia, Province.....	May 2-July 10.....	3,568		
Vienna.....	May 2-8.....	1		
	May 2-Aug. 14.....	37	9	August, 1914-May 8, 1915: Cases, 1,487; deaths, 316. May 9-15, 1915: Cases, 28. June 6-12: Cases, 13.
Hungary—				
Budapest.....	do.....	291	1	
Prague.....	Aug. 1-14.....	4		
<b>Brazil:</b>				
Rio de Janeiro.....	Apr. 18-Aug. 7.....	166	63	
Rio Grande do Sul.....	Sept. 2.....			Epidemic.
<b>Canada:</b>				
Alberta—				
Edmonton.....				Epidemic 30 miles south closed Aug. 14, 1915: Cases, 100 (estimated).
Ontario—				
Hamilton.....	June 1-30.....	2	4	
Peterborough.....	July 10-17.....		1	
Sarnia.....	June 13-19.....	1		
Toronto.....	June 6-Aug. 7.....	7		
Quebec—				
Montreal.....	June 13-Aug. 7.....	11		
Sherbrooke.....	June 1-30.....		1	
<b>Canary Islands:</b>				
Santa Cruz de Teneriffe.....	July 18-24.....		1	
<b>Ceylon:</b>				
Colombo.....	May 2-Aug. 7.....	108	17	
<b>China:</b>				
Amoy.....	July 4-17.....			Present.
Chungking.....	May 23-June 19.....			Do.
Foochow.....	May 9-22.....			Do.
Harbin.....	May 3-9.....	1		
Hongkong.....	May 9-Aug. 7.....	9	6	
Manchuria Station.....	June 21-27.....	2		Eastern Chinese Railway
Nanking.....	June 20-Aug. 14.....			Present.
Shanghai.....	May 9-July 3.....	5	5	Natives.
Tientsin.....	May 16-22.....		1	
<b>Dutch East Indies:</b>				
Java.....				
Batavia.....	Apr. 18-July 24.....	640	157	
	Apr. 23-July 17.....		30	Do.
<b>Egypt:</b>				
Alexandria.....	May 21-July 15.....	41	14	
Cairo.....	Apr. 30-July 15.....	18	8	
<b>Germany:</b>				
Hamburg.....	June 6-12.....	1		
Government districts—				
Allenstein.....	June 13-19.....	1		
Arnsberg.....	do.....	1		
Breslau.....	June 20-July 3.....	1		
Danzig.....	June 13-July 31.....	2		
Gumbinnen.....	May 23-29.....	2		
Marlenwerder.....	May 23-July 31.....	3		
Merseburg.....	June 20-July 3.....	1		
Oppelen.....	May 16-July 31.....	9		
Posen.....	May 30-June 5.....	3		
Potsdam.....	June 13-July 3.....	3		
				Total, May 16-July 3, 1915: 9 cases.

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.**

**Reports Received from June 26 to Sept. 24, 1915—Continued.**

**SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Great Britain:				
Bristol.....	Mar. 21—May 22...	29	7	1 from vessel from Bombay. Maximum incidence, Apr. 4-17: Cases, 22; deaths, 2.
London.....	May 30—June 12...	3		
Greece:				
Saloniki.....	May 23-23.....		1	
India:				
Bassein.....	May 2-8.....		1	
Bombay.....	May 2—Aug. 7.....	221	118	
Calcutta.....	Apr. 25—July 10.....		255	
Karachi.....	May 2—July 31.....	25	4	
Madras.....	May 2—Aug. 7.....	27	16	
Moulmein.....	May 23-29.....		1	
Pegu.....	Apr. 18—June 12.....	1	1	
Rangoon.....	Apr. 18—July 24.....	119	55	May 1-31, 1915; Cases, 37; deaths, 14.
Indo-China:				
Provinces—				
Anam.....	Jan. 1-31.....			Present.
Cambodia.....	Jan. 1—Feb. 28.....	32	5	
Cochin China.....	Jan. 1-31.....	12		
Laos.....	Feb. 1-28.....	6		
Tonkin.....	Jan. 1—Feb. 28.....	66	12	
Saigon.....	May 23—July 10.....	2	2	
Italy:				
Milan.....	May 1-31.....		1	
Turin.....	Aug. 16-22.....		1	
Japan:				
Taiwan, island.....	May 23-29.....		1	
Mexico:				
Acapulco.....	July 14—Aug. 22.....		2	
Aguas-calientes.....	June 7—Aug. 29.....		16	
Frontera.....	May 23—Aug. 14.....	129	51	
Mazatlan.....	June 23—July 13.....		3	
Monterey.....	June 14—Aug. 1.....	9		
Nuevo Laredo.....	Sept. 11.....	2		In persons from San Luis Potosi.
Progreso.....	June 6—July 24.....	7	1	
Salina Cruz.....	June 1-30.....	4	1	Soldier from San Geronimo.
Vera Cruz.....	June 7—Aug. 22.....	95	49	
Portugal:				
Lisbon.....	May 23—Aug. 28.....	27		
Russia:				
Moscow.....	May 2-15.....	19	5	
Petrograd.....	May 8—July 24.....	329	130	
Riga.....	May 9—July 17.....	61		Mar. 1-31, 1915; Cases, 89; deaths, 22.
Vladivostok.....	May 29—June 4.....	1		Sept. 27—Oct. 31, 1914: Cases, 51; deaths, 16. Nov. 1-28, 1914: Cases, 70; deaths, 23.
Warsaw.....				
Serbia.....	Apr. 21—May 3.....	356		
Spain:				
Madrid.....	June 1—July 31.....		7	
Seville.....	May 1—June 30.....		7	
Valencia.....	May 30—Aug. 21.....	82	10	
Straits Settlements:				
Penang.....	Apr. 25—May 15.....	6	2	
Singapore.....	May 23-29.....	1		
Switzerland:				
Basel.....	May 16—July 3.....	18		
Turkey in Asia:				
Bagdad.....	May 2-8.....			Present.
Beirut.....	May 16—July 31.....	78	32	
Haifa.....	May 3—July 25.....	9	1	
Jaffa.....	May 9-29.....	2		
Mersina.....	May 30—June 5.....	1		
Tripoli.....	May 2-8.....			Do.
Union of South Africa:				
Cape Town.....	June 24—July 30.....	3		

# SANITARY LEGISLATION.

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## COURT DECISIONS.

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### MAINE SUPREME JUDICIAL COURT.

#### Contract of a Board of Health with One Member of the Board Held Not Valid.

LESIEUR *v.* INHABITANTS OF RUMFORD, 93 Atl. Rep., 838. (Apr. 20, 1915.)

Members of boards of health occupy a position of trust, and they should not place themselves in situations where their personal interests may conflict with their duties to the communities for which they act.

A contract for services made by a board of health with one member of the board is void, even when the contract is reasonable and made in good faith.

Plaintiff was a member of the Board of Health of Rumford, Me. The board employed him at \$10 a day to care for a patient having a contagious disease. The court held that the contract was void.

In such a case it may be possible for the member of the board to recover for services rendered what they are reasonably worth, even though he can not recover on the contract.

KING, J.: Action of assumpsit to recover for services performed in attending Wilfred Boussalari, who was infected with smallpox and placed in quarantine. The declaration contains three counts: (1) A count on an account annexed for 10 days' services at \$10 per day; (2) a count declaring on an express contract alleged to have been made with the plaintiff by the Board of Health of Rumford whereby he was to perform the particular service at the specified price of \$10 per day, and alleging that he performed the service for the period of 10 days; (3) an omnibus count. During the trial the plaintiff voluntarily struck out the omnibus count and stipulated that he would rely solely upon his alleged express contract. At the close of the evidence for the plaintiff, a nonsuit was ordered, and the case is before this court on exceptions to that ruling.

We think the evidence would have justified the jury in finding that the express contract was made as alleged; and no question was raised as to the performance of the services sued for.

The defendant claimed that the plaintiff was not entitled to recover, because it was his duty to perform the services sued for in his capacity as "town physician." But that claim is not sustainable under the evidence. The plaintiff's contract with the town as town physician was to take care "of the town paupers" so far as they required medical aid. There is no evidence that Boussalari was a pauper at the time he became infected with this contagious disease. And the statute expressly provides that persons who become needy and are assisted with necessary food, medicine, etc., while in quarantine on account of a contagious disease, shall not "be considered a pauper or be subject to disfranchisement for that cause, unless such persons are already paupers as defined by the revised statutes." (Pub. Laws 1909, c. 25, sec. 2; Eden *v.* Southwest Harbor, 108 Me. 489, 81 Atl. 1003.)

But it appears that the plaintiff was one of the three members of the board of health of Rumford at the time the contract between him and the board was made and while the services thereunder were being performed, and for that reason the defendant contends that the contract was illegal and unenforceable. That is the vital question presented. Does such a contract so contravene public policy that it should not be enforced?

It has been said that no exact definition of public policy has ever been given. The courts, however, have frequently approved Lord Brougham's definition of public policy as the principle which declares that no one can lawfully do that which has a tendency to be injurious to the public welfare. (*Egerton v. Earl Brownlow*, 4 H. L. Cas. 1, 235.) This principle has been termed the policy of the law, or public policy in relation to the administration of the law. Precisely what public policy is in any given case may be a difficult question to answer with precision. It has been well said, however, that, whenever the courts are called upon to scrutinize a contract which is clearly repugnant to sound morality and civic honesty, they need not look long for a well-fitting definition of public policy or hesitate in its practical application to the law of contracts. It may be said, as a general statement of some of the principles underlying the doctrine of public policy as applied to the law of contracts, that a contract is against public policy if it contravenes some public statute or tends clearly to injure the public health, or the public morals, or to work injustice and oppression, and thereby injure the public welfare, or to impair the public confidence in the purity of the administration of the law, "or to undermine that sense of security for individual rights, whether of personal liberty or of private property, which any citizen ought to feel."

It may be assumed that the contract in question is not expressly prohibited by statute. Nor does it stipulate for the doing of anything repugnant to morality; on the contrary, the service contracted for was necessary and lawful to be done. Nevertheless, where the contract is not prohibited by statute and stipulates for nothing that is *malum in se* or *malum prohibitum*, if it clearly appears to be in violation of some well-established rule of law, or that its tendency will be harmful to the interests of society, it is against the policy of the law to uphold and enforce it.

It is well established as a general rule that one acting in a fiduciary relation to others is required to exercise perfect fidelity to his trust, and the law, to prevent the neglect of such fidelity, and to guard against any temptation to serve his own interests to the prejudice of his principal's, disables him from making any contract with himself binding on his principal. The invalidity of a contract entered into in violation of this rule does not necessarily depend upon whether the fiduciary intended to obtain an advantage to himself, but rather upon whether it affords him the opportunity, and subjects him to the temptation, to obtain such advantage. The test is not whether harm to the public welfare has in fact resulted from the contract, but whether its tendency is that such harm will result.

Applying this rule to the contract declared on, and testing it by those principles which constitute public policy, as recognized by the common law, and as evidenced by the trend of legislation and judicial decisions, we are constrained to hold that the contract does so far contravene public policy that it ought not to be upheld and enforced through the administration of the law.

Local boards of health are authorized by statute, and it is their duty, when any person is infected with a disease or sickness dangerous to the public health, to provide for the safety of the inhabitants, as they think best, by removing him to a separate house, if it can be done without great danger to his health, and by providing nurses, and other assistants and necessities for such person, all the expenses thus incurred to be at his charge, or that of his parent or master, if able; otherwise at the expense of the town where the person fell sick, if he resides there, but, if he does not reside there, the board of health has power to determine how much of the expenses shall be borne by that town and how much by the town of his settlement. See *Eden v. Southwest Harbor*, 108 Me. 489, 81 Atl. 1003, where the statutory provisions are compared and construed.

In making such provisions for the care of a person placed in quarantine, the members of the board of health act in a fiduciary capacity. Their contracts therefore impose upon others the burden of paying the expenses thereby incurred. They are public officers, clothed by the legislature with power to incur expenses for others to pay. The law requires of them perfect fidelity in the exercise of that power, and whatever

has a tendency to prevent their exercise of such fidelity is contrary to the policy of the law, and should not be recognized as lawful and enforceable through the administration of the law.

It is suggested by the plaintiff that in making the contract in question there was no dishonesty, fraud, or concealment on the part of the board or himself; that he acted openly and avowedly for himself; and that the other two members represented all others interested in the contract. But we think that does not answer the requirements of the law. In making provision for the care of Boussalari, it was the plaintiff's duty as a member of the board of health to act for others and for their interests, and not for himself and for his interests. That his personal interest in making the contract, and its performance, was antagonistic to a proper performance of his duties as a member of the board of health, is most apparent. As to the price to be paid for the services contracted for, as to the length of time they should continue, as to the manner in which they should be performed, in respect to all these, his personal interest was naturally in conflict with his duty as a member of the board. The statute provides that no one having access to any person infected with a contagious disease shall mingle with the general public until he has complied with such sanitary precautions as the board of health may prescribe. He can not leave the premises without a certificate from the board that the necessary sanitary precautions required have been carried out. The board has power to order the destruction of clothing and other articles of property which have been exposed to infection, if they deem it necessary to prevent the spread of the infection. The plaintiff was a physician, and undoubtedly the health officer of the board. It is a reasonable inference that the other members of the board would be influenced by his suggestions, even as to those precautions which it was the duty of the board to require of him as an attendant upon an infected person. The inevitable conclusion, therefore, is that the making and performing of the contract declared on placed the plaintiff in a situation of temptation to serve his own personal interests to the prejudice of the interests of those for whom the law authorized and required him to act in the premises as an official. Accordingly we think the contract must be regarded as violating a well-established principle of law, one which it is the policy of the law not to have violated, as is evidenced in uniform judicial decisions, and recognized by legislative enactments.

No member of a city government shall be interested, directly or indirectly, in any contract entered into by such government while he is a member thereof; and contracts made in violation thereof are void. (R. S., c. 4, sec. 39.) No trustee, superintendent, treasurer, or other person holding a place of trust in any State office or public institution of the State shall be pecuniarily interested, directly or indirectly, in any contracts made in behalf of the State or of the institution in which he holds such place of trust, and any contract made in violation thereof is void. (R. S., c. 121, sec. 11.) Assuming, as we do, that these statutory prohibitions do not directly apply to a member of a local board of health, yet the principles on which they are founded are quite as applicable to a contract made by a board of health with one of its own members as to the contracts expressly inhibited in those statutes. They also clearly indicate that it is the policy of the State that persons, whom the law has placed in positions where they may make, or be instrumental in making, or in superintending the performance of, contracts in which others are interested, should not themselves be personally interested in such contracts. See Opinion of the Justices, 108 Me., 548; 82 Atl., 90; and cases there cited.

In *Gaw v. Ashley* (195 Mass., 173; 80 N. E., 790; 122 Am. St. Rep., 229) it was held that the board of health of a city, who are authorized to appoint a quarantine physician under an ordinance giving him a compensation fixed by the city council, with the right in extraordinary cases to charge to the sick under his care for medicine and medical attendance such sums as the board of health may approve, could not lawfully

appoint one of their own members such quarantine physician. The decision was put on the ground that the appointment was against public policy, because his personal interests under the appointment were inconsistent with the proper performance of his duties as a member of the board of health.

And in *Spearman v. City of Texarkana* (reported in 58 Ark., 348; 24 S. W., 883; 22 L. R. A., 855), where a city board of health, having power to employ a physician for the purpose, employed a member of their own board, who was a physician, to make a personal examination of a case of diphtheria said to exist in the city and which had caused the closing of the public schools, it was held that the contract of employment, being between the board and one of its members, was against public policy and not enforceable. But the court there further held that, while the agreement of employment was of no binding force as a contract, yet if the services were performed in good faith, the plaintiff might recover upon a quantum meruit what his services were reasonably worth.

Our conclusion, therefore, in the case at bar is that the nonsuit was properly ordered. The plaintiff relied solely upon the express agreement made between him and the board of health of which he was a member. That agreement had no binding force as a contract and is not enforceable through the administration of the law, because in violation of public policy. But this conclusion does not imply that the plaintiff may not be entitled to recover upon a quantum meruit what he is reasonably entitled to for the services performed of which the defendant has had the benefit.

Exceptions overruled.

#### NEW YORK SUPREME COURT—NEW YORK COUNTY.

##### Prevention of Rabies—Muzzling of Dogs—Regulation Held to be Valid.

PEOPLE EX REL. KNOBLAUCH v. WARDEN OF CITY PRISON, 153 N. Y. Sup., 463. (February, 1915.)

The possession of dogs in a city is subject to the limitation that such possession must not interfere with the security, health, and comfort of the inhabitants of the city; and the ordinances intended to prevent rabies, made by the proper municipal authorities, must be accepted as limitations upon the privilege of such possession.

Section 80 of the Sanitary Code of the City of New York requires that dogs must be muzzled when in public places in the city. The court decided that this section was valid.

LEHMAN, J.: The relator has been held by a city magistrate for violation of section 80 of the Sanitary Code:

No unmuzzled dog shall be permitted at any time to be on the public highway or in any public park or place in the city of New York.

She now claims that her detention is illegal on the ground that the regulation is unconstitutional. This section of the sanitary code was enacted by the board of health by virtue of the provisions of section 1172 of the charter, giving them power to amend the sanitary code, to "publish additional provisions for the security of life and health in the city of New York, \* \* \* not inconsistent with the constitution or laws of this State." The relator and the American Kennel Club, which has been given the right to file a brief in this proceeding, now urge that the board of health has no power to pass any such ordinance, on the ground that under section 51 of the charter the board of aldermen has been expressly given the power "to regulate or forbid the keeping of dogs," and that this power is exclusive, or, if not exclusive at the start, it became exclusive when the board of aldermen had exercised its power by regulating the presence of dogs in "public streets, highways, and parks," by ordinance of June 13, 1911.

It seems to me that this contention is not in accord with logic or precedent. The board of aldermen is given power to enact ordinances and general regulations cover-

ing a wide range of subjects for the general welfare of the city. Matters of health are, however, specifically placed within the jurisdiction of the board of health, and if the general regulations made by the board of aldermen are insufficient, in that they fail to forbid acts which are detrimental to the health of the public, it seems to me that it would be unreasonable to hold that the board of health has no power to make additional regulations. Such a holding would preclude the board of health from making regulations in regard to so many matters that its jurisdiction to legislate in regard to public health would be most seriously restricted. A most cursory reading of the sanitary code shows that the board of health has enacted many ordinances which in some manner relate to matters which the board of aldermen has general power to regulate, yet the validity of these ordinances has always been upheld. A general power in the board of aldermen to regulate certain businesses and acts is in no wise in conflict with a power of the board of health to impose additional provisions for the specific purpose of protecting the public health. The provision of the sanitary code is therefore valid, if it is a provision for the security of life and health within the meaning of the statute, and is not in conflict with the constitution.

The primary object of the ordinance is to secure protection against rabies. In spite of the discussions as to the prevalence or even existence of this disease, the prevailing opinion, both lay and medical, is that such a disease exists and is a menace to public health. The official records of the board of health show that in each of the last two years there have been 8 cases of human rabies, and that during the year 1907 there were 28 cases of human rabies. The percentage of mortality in such cases is 100; that is to say, the disease, once established, is absolutely incurable. It is also shown that the disease is spread among animals by one rabid animal biting a sound animal, and is spread among human beings only by bites from rabid animals. The inference from these facts is clear. The protection from a disease which actually exists and kills a number of persons each year is a function of the board of health. The disease can be completely eradicated if it becomes impossible for a rabid animal to bite another animal or a human being, and the disease can be controlled in exact proportion that control and protection from such bites can be secured. Any rule made by the board of health which has a reasonable and direct relation to securing protection from bites of animals which may be rabid is therefore a proper exercise of its functions. The relator does not dispute that this is the law, but urges that the ordinance under consideration goes beyond the needs of the situation. It must be remembered, however, that the determination as to the means of meeting a threatening situation has been vested in the board of health, and not in the courts.

The Society for the Prevention of Cruelty to Animals, which has received leave to file a brief in support of the unconstitutionality of the ordinance, concedes that the comparative rareness of the rabies would not warrant the exposure of human beings to the disease, but urges that:

It is, however, believed that complete protection to human beings can be effected without the enforcement of so sweeping a regulation as that here under consideration. The court will probably have little difficulty in conceiving of situations where the proper use of a leash or of some form of closed conveyance could secure perfect protection to the public.

This argument, however, entirely begs the real question. The court has nothing to do with the wisdom of the ordinance; perhaps a less sweeping ordinance would effect the same result; perhaps there are conditions where a proper use of a leash would secure perfect protection to the public. The controlling facts are, however, that a leash does not under all circumstances afford perfect protection, for it is notorious that leashed dogs at times bite human beings and not infrequently bite other animals, and that in such cases the addition of a muzzle would have afforded more perfect protection. The disease of rabies must necessarily be exterminated if rabid animals



can be prevented from biting sound animals. That result can be reached if the present ordinances are successfully enforced; i. e., if all stray animals are driven from the streets, and dogs allowed only under the double protection of muzzles and leashes. Under the circumstances it seems to me quite illogical to urge that the ordinance bears no reasonable and direct relation to its purpose. Consequently the court must hold that it comes fairly within the power of the board of health, even though the court might feel, which it by no means desires to intimate, that it might have found other means less annoying to dog owners which might prove equally effective.

All of us who own and love dogs must realize that the possession of dogs in the city is subject to the limitation that such possession must not interfere with the security, health, and comfort of the other inhabitants of the city, and the ordinances made by the proper municipal authorities for the protection of health or comfort must be accepted as limitations upon the privilege of such possession. It is urged, however, the ordinance covers cases where a muzzle would be absolutely useless and would have no bearing upon the protection of public health—for instance, where a dog is in the street but in an automobile. It is unnecessary in this proceeding to consider whether it does cover such case. It is the duty of the court to give an ordinance, where possible, such construction as would not render it unconstitutional. A construction which would require a muzzle and leash on dogs in automobiles, etc., in the public streets might or might not be unconstitutional, but if the courts in a proper proceeding directly raising this question should determine that such a construction would render the statute unconstitutional they would without doubt also hold that no such construction of the present ordinance is necessary. Writ is therefore dismissed.

Writ dismissed.

# MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

## DURHAM, COUNTY AND CITY, N. C.

### Milk and Milk Products—Production, Care, and Sale. (Reg. Bd. of H., July 5, 1915.)

ART. 4. SECTION 1. *Permits required.*—No person, firm, or corporation shall produce for sale, sell, offer for sale, or have in his, her, or their care, charge, custody, control, or possession for sale or other disposal within the city of Durham or the sanitary districts of East or West Durham or its police jurisdiction, any milk, cream, or buttermilk, without first obtaining, from the division of meat and milk inspection of the department of health, a permit to conduct such business. A fee of 50 cents per cow will be charged as a license to conduct such business. Fee shall be paid at the time the permit is issued and made payable to the board of health.

SEC. 2. *Application for permit.*—Application for a permit to conduct a dairy or milk depot (including ice cream plants) in the county or city of Durham or the sanitary districts of East or West Durham shall be made in writing to the division of meat and milk inspector, department of health, at least 10 days prior to the time it is desired to begin or engage in such business for which such application is made. Permits when issued (new permit required when location of dairy is changed) are not transferable, and the purchase of a business already in operation requires application for a new permit as outlined above. All permits shall be limited and shall expire at the end of the year during which they are issued, and if renewal is desired application must be made as set out above.

All applications shall be made on blanks furnished by the department of health for that purpose and shall set forth the name and residence of the applicant, if an individual, and the names and residences of the principal officers, if the applicant is a corporation, together with the location of the premises for which the permit is desired. Such application must state whether the dairy products are to be sold in a milk depot or from a delivery wagon and, if from a wagon, the number that are to be employed in carrying on such business. This application shall further state whether the milk, cream, or buttermilk is to be sold exclusively in bottles or in bulk and bottles; and if a dairy, it shall state the number of cows used for the production of milk at such place.

SEC. 3. *Inspection and investigation of previous record.*—No application for a permit to conduct a milk depot or dairy shall be approved if the records of the division of meat and milk inspection show that such milk depot or dairy, or any part of such establishments in which milk, cream, buttermilk, or other milk products are being handled, prepared, or stored is in an insanitary condition, or is being operated contrary to, or in violation of the laws and ordinances of the board of health or of any ordinance of the county and city of Durham. If the record of the applicant is not on file in the office, or if the applicant being newly engaging or desiring to engage in such business in the county or city of Durham or the sanitary districts of East or West Durham for the first time, an inspection of such place shall be made by an inspector of the division of meat and milk inspection of the department of health within 10 days from date of the application. Such inspection shall determine the suitability of the location, the condition of the equipment, the sanitary condition of the premises, and the method of the applicant.

No permit shall be issued to any applicant who has a bad record or who has been repeatedly convicted for violation of the dairy laws of the county and city of Durham. The applicant, if refused a permit on account of unsanitary conditions, lack of equipment, faulty methods, or for repeated adulteration of milk, cream, or buttermilk, may appeal to the superintendent of health for a hearing. The superintendent of health, after a full investigation, may, at his discretion, recommend the applicant for a permit if he is satisfied that the laws and ordinances of the county and city of Durham and the regulations of the department of health will be conformed to in the future.

SEC. 4. *Revoking permit.*—If after granting a permit as above provided the holder fails, neglects, omits, or refuses to comply with the laws and ordinances of the county and city of Durham or the rules of the department of health, or repeatedly sells, or offers to sell, or has in his possession for such purpose milk, cream, or buttermilk adulterated in any manner or below the standard required by this ordinance, the superintendent of health shall revoke his, her, or their permit with or without notice, and no liability shall attach to the county or city or to any officer of the department of health by reason of such revocation, nor shall the city or county be required to refund any money for the unexpired term for which a license may have been obtained. The superintendent of health may grant the holder of a "revoked permit" a hearing if he deems such action necessary. Applicant may further appeal to board of health for final adjustment.

SEC. 5. *Reissuing "revoked" permit.*—If after the revocation of a permit the defendant complies with the laws of the city and county and the requirements of the department of health and makes manifest his intention to meet them in future, the superintendent of health may, at his discretion, recommend that the permit be reissued.

SEC. 6. *Exhibit permit.*—Every milk dealer shall post his, her, or their permit in a conspicuous place on the premises for which it has been issued.

SEC. 7. *Dairies outside of Durham County.*—The proprietor or manager of any dairy situated outside of Durham County desiring to sell or dispose of his dairy products in the city of Durham or sanitary districts of East or West Durham shall make application to the division of meat and milk inspection of the department of health for a permit for that purpose on blanks that will be supplied on application. The application for a permit shall be accompanied by a certificate in writing, sworn and subscribed to before some person qualified to administer oaths, after an inspection of the location, and condition of the barn and milkroom, the methods of the applicant, the kind and condition of the equipment, after an examination of the animals for injury or disease (including the application of "tuberculin test") by a competent veterinarian or other qualified person; such certificate shall cover fully the findings of such person making the inspection.

The inspection shall determine the suitability of the location, the kind and condition of the equipment and the methods of the applicant and the sanitary condition of the premises.

The "tuberculin test" records shall be forwarded to the department of health with the other data composing the report on such dairy, which shall include also a score card, supplied by the department of health, properly filled out by the person making the inspection, and the affidavit of the owner or manager made after an examination of the certificate of inspection, the score card, and the tuberculin test records.

The proprietor or manager shall examine all data and other information composing the report, and if the same is true and correct to the best of his knowledge, information, and belief he shall so state under oath. Such person shall further state that all milk shipped or intended for shipment for the supply of the city of Durham or sanitary districts of East or West Durham is produced by him on the premises covered by the inspection and from the cows included in the test: *Provided, however,* That he may ship the dairy products of any other dairy that has been granted a permit by the

department of health if the name of such other dairy is furnished with the amount obtained from such source.

If any illness of an infectious or contagious nature is found to exist or to have existed in the recent past among the attendants or employees of the dairy or among their families, this fact shall be set out, stating the apparent cause of the illness.

All reacting animals that are found in the dairy herd shall be removed from the premises and disposed of in accordance with the laws and ordinances of the city of Durham and its police jurisdiction, and this disposition shall be shown in the certificate of the person making the inspection. If the dairy is properly equipped and maintained as required in this ordinance, as shown by the certificate of inspection, a permit shall be issued to such applicant. The department of health reserves the right to make inspection of all such dairies from time to time and as often as may be desired, to see that the law is being complied with constantly, but this shall not relieve the owner or manager of the duty imposed in this section.

SEC. 9. *Reinspections and additional statements required.*—Reinspections may be required whenever, and as often as it may be considered necessary by the department of health, and notice to this effect shall be given in writing, allowing 10 days in which to have such examination made. Whenever, and as often as may be desired, any person maintaining a milk depot or dairy bringing or shipping dairy products into the city of Durham or its police jurisdiction, shall furnish the department of health a full and true statement, under oath, of the sources of the supply imported, sold or distributed by him, or them, and the names of the persons from whom the same was obtained and the amount from each source.

SEC. 10. *Duty of meat and milk inspectors to inspect dairy farms.*—It shall be the duty of the officer of the division of meat and milk inspection of the department of health, to inspect all dairies, or dairy farms, and other establishments from which milk, cream, or buttermilk is brought into the city of Durham and sanitary districts of East and West Durham, from time to time and as often as may be desired to ascertain that the provisions and requirements of this ordinance are complied with constantly. The officers of the department of health shall have the right at any and all times to enter upon, or into the premises of any producer, vendor, or distributor of milk authorized in this ordinance, and it shall be unlawful for any person, or persons, firm or corporation to obstruct, interfere, hinder or prevent any of such officers in the performance of the duties required, and any refusal on the part of any such producer, vendor, or distributor to allow such entry and such inspection as may be required and directed by the officers of the department of health shall be punished by the revocation of the permit of such producer, vendor, or distributor.

SEC. 11. *Milk not to be sold or disposed of unless permit granted.*—No person, firm, or corporation shall send into, bring into, or receive, sell, offer or expose for sale, exchange, deliver, or distribute within the city of Durham or sanitary districts of East or West Durham, any milk, cream, or buttermilk from a dairy for which a permit has not been issued, or from a dairy the permit for which has been revoked. All milk, cream, or buttermilk brought into or shipped into the city of Durham or sanitary districts of East or West Durham in violation of the provisions of this section shall be confiscated, and destroyed by the officers of the department of health. No milk shall be shipped into said city of Durham or sanitary districts of East or West Durham on any railroad or express car unless the cans are sealed with a metal seal to prevent opening or exposure during transit.

SEC. 12. *Dairy farms to be scored.*—All dairies supplying or furnishing dairy products to consumers in the city of Durham or sanitary districts of East or West Durham or producing such products for sale or other distribution in above-named district, shall be inspected and scored from time to time, on a form of score card adopted by the department of health. No dairy shall be granted a permit to produce milk for sale or other distribution in the city of Durham or its police jurisdiction unless a final

score of 45 out of a possible 100 points be made, on being scored by the inspectors of the division of meat and milk inspection of the department of health, or if the score on equipment is less than 15 or for methods less than 30. If any dairy already in operation fails to make the required score, the owner or manager shall be notified either verbally or in writing of his lack of equipment, or faulty methods, and the products of such dairy shall be excluded from the city of Durham and sanitary districts of East or West Durham until the unsatisfactory conditions have been improved, and the required standard conformed to. It shall be unlawful to ship or to bring into or distribute within the city of Durham or sanitary districts of East or West Durham in any manner the products of, or from any dairy farm failing to maintain the required standard, the owner or manager of which has been notified that his dairy products are excluded from the city or sanitary districts of East or West Durham temporarily.

SEC. 13. *Denials to or interference with authorized persons in the duties prescribed in this ordinance.*—If any person or persons refuse to comply with, or willfully connive at, or assist in a violation of any of the provisions of this ordinance, or whoever in any manner interferes, hinders, obstructs, delays, resists, denies, prevents, or in any manner interferes or attempts to interfere with the superintendent of health, meat and milk inspector, or any officer of this department of health, or any member of the board of health in the performance of any duty herein enjoined, or shall refuse to permit such officials or others to perform their duties by refusing them, or any of them, entrance to any premises where any milk, cream, or buttermilk is sold or kept or where cows are kept or stabled, or refuses to permit any animal to be viewed or inspected or any milk or cream to be viewed, inspected, tested, or analyzed or samples to be taken for such purposes, or conceals any milk or cream; or any milk-wagon driver, milk peddler, or milk vendor who with his wagon, carriage, or other vehicle containing milk or cream, or any person delivering milk by hand, runs or drives away, or attempts to run or drive away, or conceals or attempts to conceal any milk in whose possession, custody, care, or control from any of the officers aforesaid on being approached, or hailed, or addressed by any such officers in the performance of their duties, shall, upon conviction, be punished as hereinafter provided.

SEC. 14. *Access to all necessary places; right to take samples.*—The meat and milk inspector or his assistants shall have the right, and it shall be his duty, to enter and have full access, ingress, and egress to all places where milk or cream is kept for sale; to all wagons, carriages, or other vehicles, railroad cars, or conveyances of any kind used for the transportation or the delivery of milk; to any warehouse, factory, place of business, building, farm stable, or depot, establishment or places of any kind; to all vessels, cans, packages, refrigerators, or receptacles for milk or cream for the purpose of inspecting their condition or to secure or to take therefrom samples of milk or cream, not exceeding 1 quart, for the purpose of testing or analyzing same. All samples so taken shall be marked for identification by the inspector collecting same and shall be taken or sent to the laboratory of the department of health, where the sample or samples shall be tested or analyzed and the quality finally determined.

SEC. 15. *Quality of milk; standard required.*—No person, firm, or corporation shall sell, keep, offer, or expose for sale, store, exchange, transport, convey, carry, or deliver, or with such intent have in his, her, or their care, custody, control, or possession any milk which contains less than 3.5 per cent of butter fat or less than 12.5 per cent total milk solids, of which not less than 8.5 per cent are solids, not fat.

SEC. 16. *Unlawful milk.*—It shall be unlawful for any person, firm, or corporation to sell, offer for sale, exchange, deliver, dispose of, or transport, convey, or carry, or with such intent as aforesaid have in his or her care, custody, control, or possession, any milk which at 60° Fahrenheit shall have a specific gravity less than 1.029, or less than 3.5 per cent of butter fat, or less than 8.5 per cent of solids not fat, or less than 12.5 per cent total solids.

SEC. 17. The terms "adulterated," "impure," "unhealthy," and "unwholesome," as used in this ordinance, mean: (1) Milk containing less than 3.5 per cent of butter fat, less than 8.5 per cent of solids not fat, or less than 12.5 per cent total solids; (2) milk drawn from cows 20 days before parturition or 10 days after; (3) milk drawn from cows kept in an unhealthy or insanitary condition, or cows affected with any form of disease; (4) milk from cows which are supplied with water which is impure or unwholesome; (5) milk from which any part of the cream has been removed or which has been diluted with water, or with any fluid, or to which has been added or into which has been introduced any foreign substance whatever; (6) milk which contains flies or other insects, dirt, hairs, or other foreign sediment; (7) milk drawn from cows that are in a condition of filth or uncleanness or by milkers who are not personally clean; (8) milk which is shown by analysis to contain any substance or substances of any character whatsoever not natural or normal constituents of milk or to have been deprived wholly or in part of any constituent naturally or normally contained in milk.

SEC. 18. It shall be unlawful for any person or persons, firm, or corporation, by themselves or by their agents, servants, or employees in the city of Durham or sanitary districts of East or West Durham, jurisdiction thereof to render or manufacture, sell, offer for sale, exchange, deliver, distribute, or have in his, its, or their possession, with intent to sell, expose or offer for sale, or exchange or distribute for human consumption, "adulterated," "impure," "unhealthy," or "unwholesome" milk. All impure, adulterated, or unwholesome milk shall be confiscated and destroyed wherever and whenever found in the city of Durham or sanitary districts of East or West Durham by the officers of the department of health.

SEC. 19. *Carrying for sale "impure" or "contaminated" milk or cream.*—No person, firm, or corporation shall sell, offer for sale, exchange, deliver, or transport for the purposes of sale, exchange, or delivery, or have in his custody, care, control, or possession with intent to sell, offer for sale, exchange or deliver, or offer or expose for sale, exchange, transportation, or delivery to, or in the city of Durham or sanitary districts of East or West Durham, any milk or cream, whether from a single cow or the mixed products from a herd, which is unclean, diluted, impure, unhealthy, unwholesome, diseased, adulterated, decomposed, or sour, or which shall contain more than 500,000 bacteria per cubic centimeter, or which contains any pathogenic bacteria, or milk not of good quality as required in this ordinance, or milk or cream to which water, skimmed milk, or any foreign substance has been added, or milk or cream produced from cows that are sick or diseased, or milk or cream from cows kept in an unclean, filthy, or dirty, condition, or milk that has been exposed to or contaminated or affected by emanations, discharges, or exhalations from human beings or from animals that are sick with any contagious or infectious disease.

SEC. 20. *Adulteration.*—It shall be unlawful for any person, firm, or corporation to adulterate milk or cream or change it in any respect by the addition of water, skimmed milk, or any foreign substance, or by the removal of any constituent, with a view of selling or offering the same for sale or exchange, or deliver same to a purchaser otherwise than with its due proportion of its natural components. Nothing in this section shall be construed to prevent the sale of cow's milk pasteurized or modified in compositions for infant feeding according to a prescription of a registered physician: *Provided, however,* That such pasteurized or modified milk may be lawfully sold in feeding bottles only, and that each bottle shall be labeled with the name of the vender and a number, corresponding to a number of the prescription kept by the vender, and accessible on demand to any officer of the department of health: *Provided further,* That modified or pasteurized milk shall be prepared from milk of the purity required in this ordinance and delivered under the same temperature requirements.

SEC. 21. *Cream; quality.*—It shall be unlawful to sell, offer or expose for sale, exchange, or delivery, or to transport for the purpose of sale, exchange, or delivery, or to

have in care, custody, control, or possession any cream which shall contain less than 18 per cent of butter fat, or that was made from milk not of good quality as required in this ordinance, or to which has been added or into which has been introduced any foreign substance whatever. All cream that does not conform to the requirements of this section shall be confiscated and destroyed by the inspectors of the department of health.

SEC. 22. *Skimmed milk; packages; standard required.*—It shall be unlawful for any person to ship to or bring into the city of Durham or sanitary districts of East or West Durham, or to, within the limits of the said city of Durham, keep, sell, offer for sale, store, exchange, transport, convey, carry, or deliver or have in custody, control, or possession, with intent to sell or dispose of for the purpose of human food, any milk from which the cream or any part thereof has been removed, unless the same shall be contained in a can or vessel bearing a brass or other metal tag, not less than 3 inches long and 2 inches high, which shall have distinctly and plainly indorsed thereon, in letters not less than 1 inch in height, the words "Skimmed milk," and unless the same is represented to be and sold or offered for sale as skimmed milk, and not otherwise, and no such skimmed milk shall be sold or offered for sale as such unless it contains at least 9 per cent of solids other than butter fat.

SEC. 23. *Sale of skimmed milk in restaurants and cafés.*—It shall be unlawful for any person keeping, maintaining, or managing any cafe or restaurant to sell, offer for sale, or dispose of any skimmed milk, or milk from which the cream, or any part thereof, has been removed, unless such person shall at all times have conspicuously posted in such café or restaurant, where the same can be seen from all parts of the dining room or rooms, a sign or placard, printed or painted in plain letters not less than 3 inches in height and of proportionate width, and bearing the following words: "We serve skimmed milk."

SEC. 24. *Diluted cream; sale in cafés and restaurants; placard.*—It shall be unlawful for any person keeping, maintaining, or managing a café or restaurant in the city of Durham or sanitary districts of East or West Durham to sell or to offer for sale, or to dispose of any cream to which there has been added, mixed, or combined milk or other fluid unless such person shall at all times have conspicuously posted in such café or restaurant where the same can be seen from all parts of the dining room or rooms a sign or placard printed or painted in plain letters not less than 3 inches in height and of proportionate width the words or inscription, "We serve diluted cream." Such diluted cream shall contain not less than 10 per cent of butter fat.

SEC. 25. *Certified milk.*—No person, firm, or corporation shall sell or exchange, or offer or expose for sale or exchange as and for "certified milk" any milk that does not conform to the regulations prescribed by and bear the certification of a milk commission appointed by the county medical society of Durham County, organized under and chartered by the State of North Carolina. All milk sold as certified milk shall be conspicuously marked with the name of the commission certifying thereto.

SEC. 26. *Pasteurized milk.*—Pasteurizing milk is hereby defined as follows: The heating of every portion of the milk to a temperature of not less than 140° Fahrenheit maintaining same at that temperature for at least 20 minutes, and immediately cooling the same to 45° Fahrenheit. The use of this term shall be limited to milk produced and sold under the following conditions:

(a) Any person, firm, or corporation desiring to produce pasteurized milk for sale in the city of Durham or sanitary districts of East or West Durham shall make application to the department of health for a permit for that purpose.

(b) A permit shall be granted by the department of health if it appears upon investigation that the pasteurizing equipment installed is such that 90 per cent of the bacteria and all pathogenic bacteria are killed in the milk treated therein at a temperature of not less than 140° Fahrenheit, maintained at that temperature for not less than 20 minutes. Further, that the pasteurizing apparatus is equipped with a

recording thermometer of such type as that the same may be kept locked by the department of health.

(c) The thermometric record of all pasteurization of milk shall become the property of the department of health and shall be collected by its authorized representatives.

(d) Milk intended for pasteurization shall be the products of a dairy rating not less than 60 per cent on the score card of the department of health.

(e) All pasteurized milk shall be plainly marked on each bottle or other container in which such milk is delivered to consumers with a label bearing the inscription "pasteurized milk" and the name of the firm, person, or corporation producing same.

(f) All utensils used in the production and handling of pasteurized milk must be properly cleaned and sterilized each time before using and shall be so constructed that all parts are absolutely free from places where milk can accumulate or "soak in," so that it can not be removed by simple washing and the surface coming in contact with milk or cream must be smooth and free from rust.

(g) Pasteurized milk shall be delivered to the consumer not later than 24 hours after pasteurization.

(h) Milk once pasteurized shall not be repasteurized.

SEC. 27. *Sale or custody of milk or cream containing foreign matter, coloring, or preservatives.*—No person, firm, or corporation shall sell, expose for sale, exchange or deliver, dispose of or transport, convey or carry, or with any such intent as aforesaid have in his, her, or their care, custody, control, or possession any milk or cream having therein or containing any foreign substance or substances of any kind whatever, or coloring matter, or any adulteration or preservative, whether for the purpose of artificially increasing the quality of milk or cream or preserving the condition of sweetness thereof, or for any purpose whatever.

SEC. 28. Any person who shall manufacture, compound, sell, or offer for sale any milk or cream adulterations or preservatives, or any compound, coloring matter, or substance whatever for the purpose of artificially preserving the sweetness or increasing the quality of milk or cream, or for any other purpose in connection with milk or cream, shall upon conviction for such offense be punished as hereinafter provided.

SEC. 29. *Carrying on wagons "swill," "garbage," "refuse," or any substance with which milk or cream might be adulterated.*—It shall be unlawful for any person, firm, or corporation to have or carry on any wagon, or vehicle of any kind, upon or from which milk or milk products is being or is brought, carried, transported, delivered, stored, sold, exchanged, or distributed, or offered or exposed for sale or distribution, as food for any human being, any swill, garbage, refuse, or any decaying, fermenting, putrefying, foul or unwholesome, noxious or filthy matter, or any cans or vessels containing any material or substance with which cream or milk might be diluted, adulterated or rendered impure, unhealthy, or unwholesome.

SEC. 30. *Cleansing milk utensils required before their return.*—All consumers who receive milk or cream from vendors, or distributors, in cans, bottles, vessels or other containers, which are to be returned to such vendors, or distributors, shall immediately after emptying same, and before their return as aforesaid, cause such cans, vessels, containers to be washed and thoroughly cleansed. All dealers in milk or cream in cans, bottles, vessels, or other containers which are to be returned to the person shipping or delivering the same to such dealers, shall immediately after emptying the same, and before their return, as aforesaid, cause such cans, bottles, vessels, or other containers to be rinsed or cleansed. All dealers in milk or cream retailing same in cans, bottles, vessels, or other containers or receptacles of any kind shall thoroughly cleanse and sterilize all such cans, bottles, vessels, containers, or receptacles before such milk or cream is placed therein for delivery to consumers.

SEC. 31. *Unlawful to transfer milk or cream upon any street or thoroughfare.*—It shall be unlawful to transfer any milk or cream from bottles or receptacles on any street, alley, or thoroughfare, or upon a delivery wagon, or vehicle of any kind, or in



any other place in the city of Durham or sanitary districts of East or West Durham, except in a milk room or dairy depot, the sanitary condition of which has been approved by the officers of the department of health. Any person, firm, or corporation violating any provision of this section, shall upon conviction be punished as hereinafter provided.

SEC. 32. *Bottled milk; by whom bottled.*—No person, firm, or corporation shall sell offer for sale, expose for sale, or keep with the intention of selling, any milk or cream in quantities of 1 quart or less, in stores or in other places where merchandise or commodities, other than milk or cream is sold, offered for sale, exposed for sale or kept with the intention of selling (except where the milk or cream is consumed on the premises), unless the milk or cream is kept, offered for sale, exposed for sale, or sold in tightly closed bottles or receptacles of a similar character, upon the cover or cap of which is printed or inscribed in a conspicuous and legible manner, the name of the person, firm, or corporation bottling said milk or cream in such bottles or receptacles.

SEC. 33. It shall be unlawful for any retail dairyman or merchant to sell any milk or cream in any way whatsoever except in glass bottles well stoppered. Milk sold to merchants or stores for the purpose of being retailed shall in every instance be bottled, either by the dairyman or by the wholesale milk dealer, and it shall be unlawful for any retail merchant to sell milk otherwise: *Provided, however,* That this section shall not apply to restaurants or cafés, so far as purchasing milk in bulk is concerned. It shall be lawful for bakeries to purchase milk in bulk if such milk is to be used only in the preparation of prepared foods.

SEC. 34. *Bottle caps.*—It shall be unlawful to sell, offer, or expose for sale within the limits of the city of Durham or sanitary districts of East or West Durham, or to keep with the intention of selling bottle caps for use in capping milk or cream for sale or other distribution within the city of Durham or sanitary districts of East or West Durham unless such caps are put up in tubes or other sealed packages. Broken packages shall be kept in a place free from flies, dust, or any other contamination. The sale exposure for sale of bottle caps in bulk or that have in any manner been exposed to contamination is hereby expressly forbidden. No person, firm, or corporation holding a permit from the department of health to produce, sell or in any manner deal in or distribute milk or cream in the city of Durham, sanitary districts of East or West Durham, shall have in their custody, care, control, or possession, bottle caps unless the same were purchased in sealed packages, required in this section, and kept in such manner as to prevent the contamination of same while in their possession. Caps for milk or cream bottles shall not be carried on any dairy wagon or other vehicle used for the transportation or delivery of milk, nor on the person of any milk wagon driver, milk peddler or other persons engaged in handling milk or cream, unless the same are in unbroken sealed packages. Any caps that are found to be contaminated or exposed to contamination by flies, dust, or in other manner at any dairy or milk depot, same shall be confiscated and destroyed by the officers of the department of health.

SEC. 35. It shall be unlawful for any person, firm, or corporation engaged in the production, sale, or distribution of milk or cream within the limits of the city of Durham or sanitary districts of East or West Durham to use, in conducting or operating such business, any tickets other than what is known as "single service tickets."

SEC. 36. *Delivery wagons.*—It shall be unlawful for any person to bring into the city of Durham or the sanitary districts of East or West Durham, or to transport or convey from place to place within the city of Durham, or the sanitary districts of East or West Durham, any milk, cream, or buttermilk for human food, for the purpose of delivering or retailing same to consumer or customers, in an open or uncovered car, wagon, cart, or conveyance of any kind, that is not so constructed that the covering thereof shall not come in contact with the cans or vessels containing the milk or cream. All such cars, wagons, carts, or conveyances shall have the name of the owner, proprietor, or manager neatly and plainly painted on each outer side in letters not less than 3

inches in height, also the word permit and the number of the permit under which the business is conducted. It shall be unlawful to have any milk or cream in any can or vessel that is not securely covered and closed, to protect the contents thereof from the impurities of the air, or to fail, refuse, or neglect to protect such milk or cream and all cans or other vessels containing the same, or vessels used for measuring same, from the sun and rain, and, as far as practicable, from dust and all impurities of the air.

SEC. 37. *Buttermilk; standard required.*—Nothing contained in this ordinance shall be construed to prevent the sale or use of what is known as “buttermilk,” or what is known as “sour milk,” provided the same are made, prepared, or compounded from pure, clean, fresh, wholesome, and unadulterated milk within the meaning of this ordinance, and are in a sound and wholesome condition: *Provided further*, That such products shall contain not less than 9 per cent milk solids other than butter fat.

SEC. 38. *Butter defined and standard required.*—No butter shall be sold, offered for sale, kept, conveyed, carried, or transported for the purpose of sale or disposal in the city of Durham or sanitary districts of East or West Durham unless manufactured or made from the fat gathered from fresh or ripened milk or cream, and may contain a small portion of other milk constituents. Such butter shall contain not less than 82.5 per cent butter fat, and shall be free from adulterations of any kind: *Provided, however*, That this shall not be construed to prevent the use of common salt and a small amount of vegetable matter not deleterious to health.

SEC. 39. *Examination of dairy animals for disease or injury.*—The meat and milk inspector, or any assistant meat and milk inspector, shall have the right (and it shall be his duty) to enter and have full access, ingress, and egress to any dairy producing milk, cream, or buttermilk that is intended for sale or other distribution in the city of Durham or sanitary districts of East or West Durham, and to inspect, test, or examine for disease any animal composing such dairy herd, and if any animal is found to be injured or diseased in any manner that would, in the opinion of such inspector, render the milk unwholesome or unfit for human consumption, to order the removal of such cow or cows from the herd and the rejection of the milk from such animal until the recovery from such injury or disease. It shall be unlawful to neglect, fail, or refuse to remove any diseased or injured animal from any dairy herd, after being requested to do so by the aforesaid officers, or to use any of the milk produced in the supply for sale or distribution in the city of Durham or sanitary districts of East or West Durham, until such time as permission to do so has been obtained.

SEC. 40. *Tuberculin test required of all dairy animals.*—It shall be unlawful for any person, firm, or corporation authorized under the provision of this ordinance to operate or maintain a dairy for the production of milk, cream, or buttermilk for sale or other distribution in the city of Durham or sanitary districts of East or West Durham, to use the milk of or from any cow that has not been tuberculin tested by the meat and milk inspector or other officers assigned to make such tests. Every animal used in any dairy, the products of which are supplied to consumers in the city of Durham or sanitary districts of East or West Durham, or for the supply of said city, shall be tested with tuberculin once a year, and more often if it is deemed necessary by the meat and milk inspector. All animals “reacting” to the tuberculin test shall at once be removed from the dairy herd and isolated and kept at some place that is satisfactory to the meat and milk inspector of said city, under whose direction the work was done, until final disposition is made of such condemned animals. All “reactors” shall be condemned, and shall be marked by placing a metal tag in the right ear, bearing the words “Durham Dairy—Condemned,” and bearing a serial number, and such animals shall be further marked by branding the same in a conspicuous place on the right side with the letters “T B,” of not less than 2 inches in height. The tags and other marks of identification shall not be removed or obliterated by any person without being authorized to do so by the meat and milk inspector. Animals found to be free from

tuberculosis as determined by the tuberculin test shall have a metal tag placed in the left ear, bearing the words "Durham Dairy—Inspected" and bearing a serial number. It shall be unlawful to hinder, obstruct, delay, or prevent or to attempt to hinder, obstruct, delay, or prevent the aforesaid officers in the duties required in carrying out the provisions of this section.

SEC. 41. *Milk depots and dairies defined.*—By a "milk depot" is meant any place, house, or room where milk is received from a dairy or dairies and prepared for market, and includes all ice-cream factories. By a "dairy" is meant any place where cattle are kept for the production and sale of milk.

SEC. 42. *Milk depots or dairies; where to be established.*—No milk depot shall be established or maintained in a room or rooms which communicate directly with any living rooms, kitchens, toilet, laundry, or stable, or places where animals are kept or slaughtered. No milk depot shall be maintained which communicates in any way with a horse or cow barn, and shall be separated therefrom by an air and odor proof partition or wall. The immediate vicinity of the milk depot, especially within 50 feet of the doors and windows thereof, shall be kept free from accumulations of rubbish, garbage, manure, and other putrefying, decomposing, infectious, and bad-smelling substances.

No dairy shall be established or maintained in unsanitary surroundings where it is designed to offer such milk or milk products to consumers in the city of Durham or sanitary districts of East or West Durham. Unsanitary conditions will be deemed to exist wherever and whenever properly constructed barns, milk rooms, and utensils are not provided; where the cattle are dirty, unhealthy, crowded, or fed food that is not wholesome, nor shall cows be watered from any water supply that is not pure and free from contamination, where the utensils are not kept clean, where the premises are not kept clean, where the udders of all cows are not washed in clean water and dried with clean cloths before milking, where the attendants do not wash their hands and put on clean outer garments prior to milking, where the milk is not immediately removed from the barn after milking each cow and promptly cooled, and where the milk is not drawn or milked into a small or restricted top milk pail of proper construction, where water-tight floors are not provided in milk room or barn, where screens are not provided, where milk rooms are not kept free from flies, and where the owner refuses to permit an inspection of his or her premises, or who refuses to cooperate with the officers of the department of health.

SEC. 43. *Dairy barns or cow stables; construction and requirements.*—All dairy barns used for stabling cows for the production of milk, cream, or butter milk for sale or disposal in the city of Durham or sanitary districts of East or West Durham shall be constructed according to and conform to the following requirements: The floors shall be smooth, free from crevices or defects, water-tight, and constructed of cement, asphalt, or tiles laid in cement, or of sound heart lumber. Such floors shall be laid with proper grades and channels for drainage and the stalls shall be of such length as will be best adapted to the size of the dairy animals kept therein. The walls and ceilings shall be smooth, tight, and free from unnecessary projections, ledges, or niches, and if shingles of wood are used for roofing, ceiling overhead will be required. There shall be not less than 500 cubic feet of air space for each cow or stall in the barn, and windows of glass corresponding to at least 4 square feet of light per each animal, arranged so that the same may be adjusted to suit varying weather conditions and to afford proper ventilation. There shall be no side sheds or horse stables connected or attached to any such dairy barns.

SEC. 44. *Maintenance of cow stables and premises.*—Dairy barns shall be kept well whitewashed on the inner side, this to be done at least twice each year, in the spring and fall, or where the interior is constructed of dressed material paint may substitute, in which case it shall be painted as often as needed, subject to inspection by the officers of the department of health. The droppings from the herd shall be removed from

the barn at least once each day, to a distance of not less than 100 feet from the barn or milk room. The lot where the cows are confined at night, as well as the premises surrounding the barn, whether used as a cow lot or not, shall be kept clean and free from manure, rubbish, or other objectional material. Cow lots must be well drained and kept free from stagnant water, and accumulations of manure inside of the cow lot where cows can have access or walk through same are expressly forbidden.

SEC. 45. (a) *Milk rooms.*—All milk rooms shall have floors of cement, tiles or heart lumber, and shall be constructed in such manner as to drain satisfactorily, and shall be free from defects and in good repair. The walls and ceilings must be smooth and tight and glass windows provided for light and ventilation, and all doors and windows shall be screened from April 1 to November 1, as must be all places where the sale of milk is permitted.

(b) *Wash rooms.*—Wherever milk is bottled or otherwise prepared, whether at the dairy or at a milk depot, a separate room shall be maintained for the purpose of receiving, storing, and cleaning the cans, bottles, and other utensils used in connection with the business, which shall be known as the washroom. This shall be separate from that part of the milk depot where the milk is stored, bottled, or handled by a complete partition and door. The washroom shall be so located that unwashed and dirty utensils do not have to pass through or be received in the room in which the milk is handled or prepared. The floor of the washroom shall be so arranged that its drainage does not run into the milk room. Dirty cans or other utensils shall not be taken into or kept or stored in the milk room. For cleansing and sterilizing cans, bottles, and all other utensils suitable facilities for hot water or steam shall be provided, also sinks or washing tanks in which all such utensils may be cleansed.

(c) *Appliances.*—Vats or cooling tanks shall be constructed of impervious material and shall have a smooth inner surface. They shall be provided with dust-proof covers and shall drain indirectly into the sewer, or if in an unsewered territory shall drain to a distance of at least 100 feet away from the milk room and washroom. The water in the vats shall always be kept clean, free from dust, slime, sediment, or milk crusts. The temperature of the water shall not be higher than 60° Fahrenheit.

(d) *Refrigerators and ice boxes.*—The inner wall of the compartment of the refrigerator or ice box where the milk is kept shall be smooth, and metal or porcelain lined. The floor shall drain indirectly into the sewer. The milk department shall be kept clean and free from any odor. Nothing but milk or milk products shall be stored or kept in such ice box. This applies to all places where milk is sold or kept for sale to consumers in the city of Durham or sanitary districts of East or West Durham.

(e) *Bottling machine.*—Where used, the bottling machine or bottle filler shall be constructed so that it can be readily taken apart and cleansed, especially the spring and plunges. It shall be cleansed thoroughly after each use, and when not in use shall be kept covered with a clean cloth or glass case.

(f) *Drying racks.*—Drying racks shall be provided on which all bottles, cans, and other utensils can be placed in an inverted position for drainage. In no instance shall bottles be inverted in bottle cases for the purpose of drainage or drying.

(g) *Pasteurizers and separators.*—Pasteurizers and separators shall be constructed so that all parts, including pipes, can be readily cleansed and sterilized, and must be kept scrupulously clean, both inside and outside at all times. The water used in connection with the dairy must be both convenient and abundant, and of absolute purity, and examinations shall be made from time to time by the city bacteriologist to determine this fact.

(h) *Utensils.*—All shipping cans, bottles, dippers, measures, strainers, stirrers, and other utensils must be so constructed that all parts are absolutely free from spaces where milk can soak in, so that it can not be removed by simple washing. The surface coming in contact with milk, cream, or buttermilk must be smooth and free from excessive rust. All utensils must be kept scrupulously clean, inside and outside at all times,

and must be kept in good repair, and free from rough surfaces of any kind. When not in use, all utensils shall be kept dry, inverted, and on specially provided racks or hooks, where flies can not come in contact with them. Bottle caps must be kept in clean, covered, dry, and rust-proof receptacles.

(i) *Maintenance and care.*—The floors shall be scrubbed and kept clean. Dry dusting and sweeping is not to be permitted. The walls, ceilings, shelves, windows, and all other surfaces must be kept clean and free from dust by washing or wiping with damp cloth. Unnecessary articles, such as boxes, old utensils, reserved stock blankets, harness, lanterns, paint cans, oil cans, and soiled clothing and other articles not used in the milk business shall not be kept in or stored in a milk room or milk depot, nor in a cow stable.

(j) *Attendants.*—Every person in charge of such milk depot or dairy shall keep himself and his employees in a clean condition and cleanly clothed while engaged in the bottling, pouring, or other handling of milk, including the milking of the cows. Smoking, snuffing, or chewing tobacco is forbidden in a milk depot or milk room, or while engaged in the handling of milk (actual contact), and plain notices shall be posted by the owner or manager of each milk depot or dairy forbidding all persons to use tobacco or expectorate while in the milk depot or milk room or in a barn where cows are being milked. Small children and all other persons not actually engaged in carrying on the work in connection with the operation of the dairy or handling of milk are not to be allowed in any milk room or milk depot where milk is being handled, and plain notices to this effect shall be posted in such rooms.

SEC. 46. *Communicable diseases.*—No person having tuberculosis, any venereal disease, or any other communicable disease shall work in any milk depot, dairy, or in any other place where milk or its products are handled. When typhoid fever, scarlet fever, diphtheria, smallpox, measles, or chicken-pox occur in the house or family of anyone engaged in the handling of milk it shall be the duty of the owner or manager to notify the superintendent of health at once of this fact, so that the necessary regulations can be enforced, in cooperation with the department of health to prevent the spread of the disease. No one afflicted with or convalescent from typhoid fever, scarlet fever, diphtheria, smallpox, measles, or any other communicable disease shall engage in the handling of milk, cream, or buttermilk during such period. When any of the above enumerated or any other communicable disease exists in the house or family of anyone engaged in the handling of milk, he shall at once discontinue his work in the milk depot, dairy, or other place in which milk is handled, or on any vehicle used for transporting or delivering dairy products. The depot wagon or dairy shall be declared "infected" if anyone with or convalescent from any of the above-mentioned diseases has worked therein or thereon, together with all milk, cream, or buttermilk with which such person may have come in contact. No person convalescent with any communicable disease or living in any house or on any premises where any communicable disease exists shall reengage in the handling of milk unless the department of health has enforced suitable quarantine regulations, and the necessary disinfection has been done under the supervision and direction of officers of the department of health. No milk bottles or other milk utensils shall be removed from any house or premises wherein exists any of the above-mentioned communicable diseases until such utensils have been disinfected under the supervision of some officer of the department of health. The superintendent of health shall have power to suspend temporarily the business of any dairyman, milk dealer, or any other place where milk is handled if he deems such action necessary to protect the public health against infection from any of the diseases mentioned in this section.

SEC. 47. *Examinations required where communicable diseases are suspected.*—Any dairyman or milk dealer authorized under this ordinance or any employee engaged in any way in producing and handling milk or any member of their families, or any person residing in the house or on the premises occupied by such person, if suspected

of having any communicable disease, may be required to submit to an examination at the hands of the superintendent of health. The superintendent of health desiring to make such an examination shall notify the dairyman or milk dealer of this fact in writing and may require such person or persons to report at his office or to such other place as he may designate within three days from the date of such notice, or if such person is ill and unable to report at such place it shall be the duty of the person receiving any such notice to have the superintendent of health informed of such illness. The superintendent of health shall take such action as the circumstances in the case seem to warrant. Failure to cooperate with the superintendent of health in carrying out the provisions of this section shall be punished by the revocation of the permit held by such person, firm, or corporation.

SEC. 48. *Milk utensils not to be used for any other purpose.*—It shall be unlawful for any person, firm, or corporation to use any milk bottle, can, vessel, or other container for milk or cream for any other purpose than as containers or receptacles for milk or cream. Milk cans and other containers for milk shall not be left upon any sidewalk, street, or alley in the city of Durham or sanitary districts of East or West Durham.

SEC. 49. *Sale of milk bottles; secondhand bottles and bottles from garbage dumps prohibited.*—No milk bottles shall be sold, exchanged, conveyed, or carried or be in the care, custody, control, or possession of anyone for the purpose of sale or disposal, except such person be a merchant or dealer in dairy supplies. Junk peddlers or junk dealers are prohibited from dealing in milk bottles, and the sale or disposal of milk bottles collected from any garbage dump are hereby expressly forbidden. It shall be unlawful for any dairyman or milk dealer to buy milk bottles to be used in supplying milk to consumers in the city of Durham or sanitary districts of East or West Durham, except from such persons or firms as provided in this section, and not otherwise.

SEC. 50. *Surface closets shall be flyproof.*—Every person, firm, or corporation maintaining or managing a dairy producing milk, cream, or buttermilk for sale or disposal in the city of Durham or sanitary districts of East or West Durham shall provide for the use of all persons connected with the operation of such business a flyproof closet, if in an unsewered territory, and all such employees shall be required to use the same. No permit shall be issued for the operation of any dairy if there exists within a radius of 500 feet of such barn or milk room an open or surface closet, unless the same be flyproof and constructed as required by article 7, section 5, of sanitary code (city of Durham). Such closets shall be kept in repair and maintained in an acceptable manner, subject to inspection by officers of the department of health.

SEC. 51. *Temperature of milk.*—It shall be unlawful for any person to keep at any dairy within the limits of the city of Durham or sanitary districts of East or West Durham, or at any dairy from which milk is shipped or brought into the city of Durham or sanitary districts of East or West Durham, any milk or cream which is to be sold or offered for sale within the limits of said city at a temperature exceeding 60° F., or to fail or neglect to immediately after such milk is drawn from the cow to cool the same to a temperature of not to exceed 60° F., or to keep or maintain any such milk or cream at a temperature exceeding 50° F. after its delivery or reception at any milk depot, store, restaurant, or any building or establishment of any kind within the limits of the city of Durham or sanitary districts of East or West Durham.

SEC. 52. *Board of health may formulate rules and regulations.*—The board of health of the city and county of Durham is hereby authorized and empowered to, from time to time, formulate such rules and regulations not inconsistent with the provisions of this ordinance, necessary to secure a standard of milk required by the provisions of this ordinance, and it shall be unlawful for any person to fail, neglect, or refuse to comply with such rules and regulations.

SEC. 53. *Special permit required.*—Any dairyman having been granted a permit under sections 1 or 2 of this ordinance who desires to sell or to dispose of his milk or milk products to any other dealer or dairyman for the supply of the city of Durham

or sanitary districts of East or West Durham, where the same is to be delivered to such dairyman or dealer outside of the limits of said city, shall be required to procure a special permit from the division of meat and milk inspector before being allowed to do so. When application is made for such special permit as required in this section, the meat and milk inspector may at his discretion grant such a permit if he is satisfied that the laws and ordinances of the city of Durham and the sanitary districts of East and West Durham will be conformed to by the applicant.

**Ice Cream—Manufacture, Care, and Sale. (Reg. Bd. of H., July 5, 1915.)**

SEC. 54. *Ice cream.*—No ice cream shall be manufactured or stored in any portion of a building which is used for the stabling of horses or other animals, or in any room used in whole or in part for domestic or sleeping purposes unless the manufacturing and storage room for ice cream is separated from other parts of the building to the satisfaction of the department of health.

SEC. 55. All rooms in which ice cream is manufactured or stored shall be provided with tight walls and floors and kept constantly clean, and shall be properly lighted, ventilated, and shall be screened from May 1 to November 1. The walls and floors of said rooms shall be of such construction as to permit rapid and thorough cleaning. The room or rooms aforesaid shall be equipped with appliances for washing and sterilizing all utensils employed in the mixing, freezing, storage, sale, or distribution of ice cream, and all such utensils after each use shall be thoroughly washed and sterilized with boiling water or live steam. Vessels used in the manufacture and sale of ice cream shall not be employed as containers for other substances than ice cream or ice-cream products.

SEC. 56. All establishments in which ice cream is manufactured shall be equipped with facilities for the proper cleansing of the hands of the operatives, and all persons immediately before engaging in the mixing of the ingredients entering into the composition of ice cream or its subsequent freezing and handling shall thoroughly wash his or her hands and keep them cleanly during such manufacture and handling. All persons shall be dressed in clean outer garments while engaged in the manufacture and handling of ice cream.

SEC. 57. All vehicles or conveyances of any kind used for the transportation or delivery of ice cream shall be kept in a cleanly condition and free from offensive odors.

SEC. 58. No urinal, water-closet, or privy shall be located in the rooms mentioned in the preceding section or so situated as to pollute the atmosphere of such rooms.

SEC. 59. Containers in which ice cream is delivered to consumers or other customers that are to be returned to the person or firm delivering same shall be washed or cleansed immediately after emptying and before their return.

SEC. 60. Ice for sale in any shop, restaurant, or other establishment shall be stored in a covered box or refrigerator. Such box or refrigerator shall be properly drained and cared for and shall be kept tightly closed except during such intervals as are necessary for the introduction or removal of ice cream or ice, and they shall be kept only in such locations and under such conditions as shall be approved by the department of health.

SEC. 61. No person, firm, or corporation shall manufacture for sale, keep for sale, sell, barter, exchange, or deal in ice cream which contains any substance other than milk, cream, sugar, eggs, and some neutral flavoring, gelatin, or pure vegetable gums, or which contains less than the required amount of butter fat as hereinafter provided. It shall be unlawful to manufacture for sale, sell, barter, or deal in adulterated ice cream.

SEC. 62. Ice cream shall be deemed to be adulterated within the meaning of this ordinance if it shall contain salts of copper, oxide of iron, ochers, or any coloring

substances deleterious to health, or if it shall contain boric acid, formalin, saccharine, or any other added substance that is deleterious to health, or if it contains flavoring matter not true to name, or if it be an imitation of or offered for sale under the name of another article.

SEC. 63. Nothing in the preceding sections of this ordinance shall be construed to prevent the use of one-half of 1 per cent of pure gelatin, gum tragacanth, or other pure vegetable gums.

SEC. 64. All cream, milk, or skimmed milk used in the manufacture of ice cream shall before use be kept at a temperature not higher than 50° Fahrenheit, nor shall any unclean or contaminated cream, milk, or skimmed milk be used in the manufacture of such ice cream, nor any old or melted ice cream or ice cream that has been returned to the manufacturer from whatever cause, shall again be used in the ice cream mixture.

SEC. 65. No ice cream shall be manufactured for sale, sold or offered for sale, exchanged, or delivered in the city of Durham or the sanitary districts of East or West Durham that shall contain less than 10 per cent of butter fat for plain ice cream and not less than 8 per cent for nut or fruit ice cream, unless the person, firm, or corporation offering or exposing for sale shall have the container properly labeled in a conspicuous place the exact amount of milk fat contained therein. All ice cream sold or offered for sale in the city of Durham or the sanitary districts of East or West Durham containing less than 10 per cent of milk fat for plain ice cream and 8 per cent for fruit or nut ice cream shall be classed as an "under standard product," and in no case shall the per cent of milk fat be lower than 3.5 per cent.

The sale of a product as ice cream containing gelatin, eggs, gum tragacanth or other vegetable gum, or the sale of a product as ice cream which contains less than the required per cent of milk fat will not be contested, provided the same is labeled and sold as such.

All public places offering or exposing for sale any ice cream which is below the required standard in milk fat or containing ingredients not found in pure ice cream shall have posted in a conspicuous place in the room where any and all persons purchasing cream may see the same, a placard printed in plain black letters, not less than 1 inch in size, on a white background, the following:

**RULINGS OF THE STATE BOARD OF AGRICULTURE UNDER THE FOOD LAW IN REGARD TO THE MANUFACTURE OR SALE OF ICE CREAM.**

Under standard ice cream served here.

Imitation ice cream is served here.

Compound ice cream served here.

SEC. 66. It shall be the duty of the officers of the department of health to make inspections from time to time of all places in the city of Durham or the sanitary districts of East or West Durham where ice cream is manufactured for sale, sold or disposed of in any manner, to see that the law is being complied with constantly. All such officers shall have the right at any time to enter and have full access, ingress, and egress to all places where ice cream is manufactured for sale, or sold or disposed of in any manner; to all wagons, carriages, or other vehicles or conveyances of any kind used in the transportation or delivery of ice cream; to any factory, room, building, or depot, establishments or places of any kind; to all packages, containers, refrigerators, or receptacles of any kind containing ice cream for sale, for the purpose of inspecting their condition or to secure or to take therefrom samples for the purpose of testing or analyzing same.

SEC. 67. It shall be unlawful for any person to sell, offer for sale, or have in his care, custody, or control, with intent to sell, any ice cream within the limits of the city of Durham or the sanitary districts of East or West Durham that is adulterated or that



was manufactured in violation of the provisions of this ordinance. All such ice cream shall be confiscated and destroyed by the officers of the department of health on ascertaining that the same is adulterated or made contrary to the provisions of this ordinance. No person shall sell, offer for sale or have in his or her care, custody, control, or possession with intent to sell, any ice cream in any container which is falsely labeled or branded as to the name of the manufacturer thereof, or to misrepresent in any way the place of manufacture of ice cream or the manufacturer thereof.

SEC. 68. Every person engaged in the manufacture, storage, transportation, sale, or distribution of ice cream in the city of Durham or the sanitary districts of East or West Durham, immediately on the occurrence of any case or cases of infectious disease, either in himself, in his family or amongst his employees, or within the building or premises where ice cream is manufactured, stored, sold, or distributed, shall notify the department of health and at the same time shall suspend the sale or distribution of ice cream until authorized to resume the same by the department of health. No vessels which have been handled by persons suffering from such disease shall be used to hold or convey ice cream until they have been thoroughly sterilized.

**Penalty. (Reg. Bd. of H., July 5, 1915.)**

SEC. 69. *Penalty.*—Any person, firm, or corporation violating any provision of any section of this ordinance shall, upon conviction for such offense, be punished according to and within the limits prescribed in section 3453 of the revision of 1905 and sections amendatory thereof of North Carolina.

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